Killer in the ER: Robert L. Mitchell learned firsthand that in an emergency room, lack of access to patient data can be disastrous. **PAGE 33**

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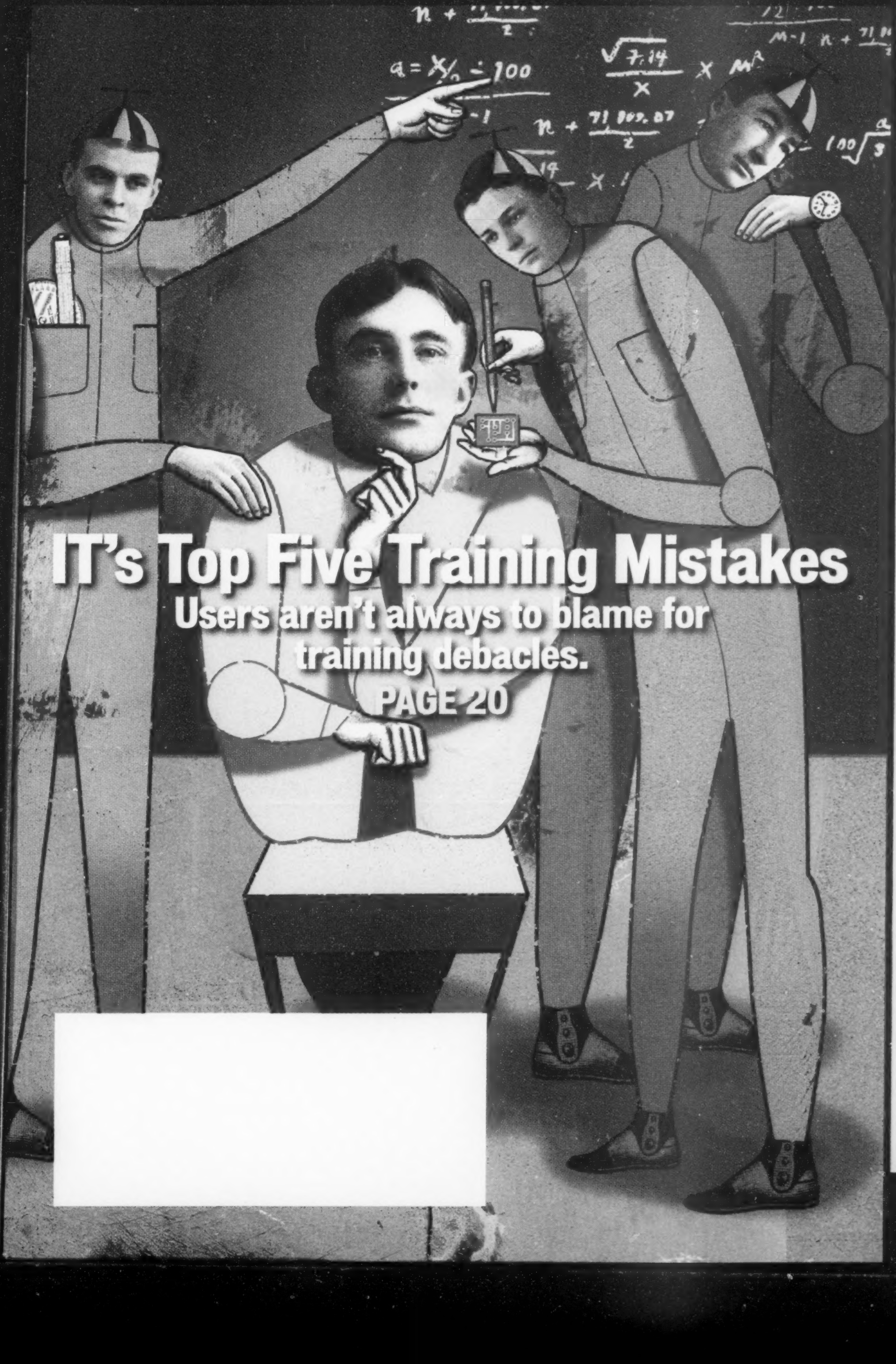

IT's Top Five Training Mistakes

Users aren't always to blame for training debacles.

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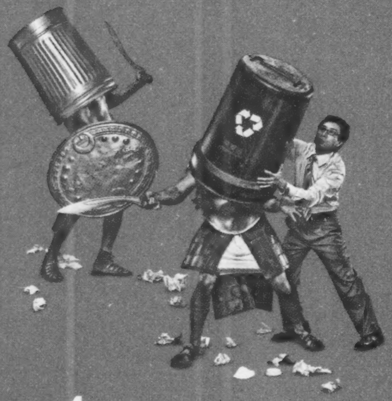
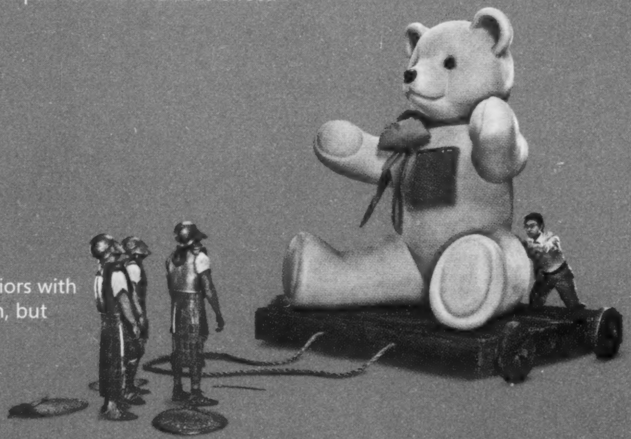
fighting ancient warriors. easy.

1. Alert the mailroom.
Tell them to refuse delivery of huge, crudely built wooden horses. If one slips through, simply return to sender.

2. Mop 'em.
A dirty mop—the dirtier the better—thrust face-ward is really gross. Who knows where that mop's been?



3. Use what's at hand.
A garbage can, dumped over the head of a Warrior, will disable him to painful and hilarious effect.



4. Unleash the Trojan teddy bear.
Fight their giant phony gift filled with Warriors with one of your own. Finding Warriors is tough, but not impossible.

5. Summon the power of Olympus.
Ancient Warriors are not going to mess with the power of Zeus. Use this (and a fake beard) to your advantage.

6. The burrito grande of death.
Eating a big lunch makes most people useless and sleepy in the afternoon, and Ancient Warriors are no different. Order the nachos, too.

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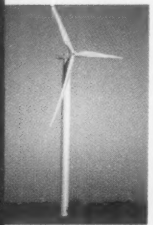

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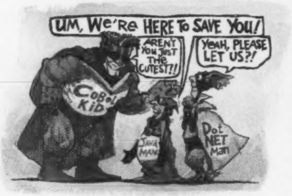
UM, WE'RE HERE TO SAVE YOU!
AREN'T YOU JUST THE CUTEST!!
YEAH, PLEASE LET US?!
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DOT NET MAN

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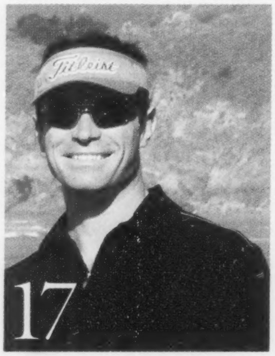

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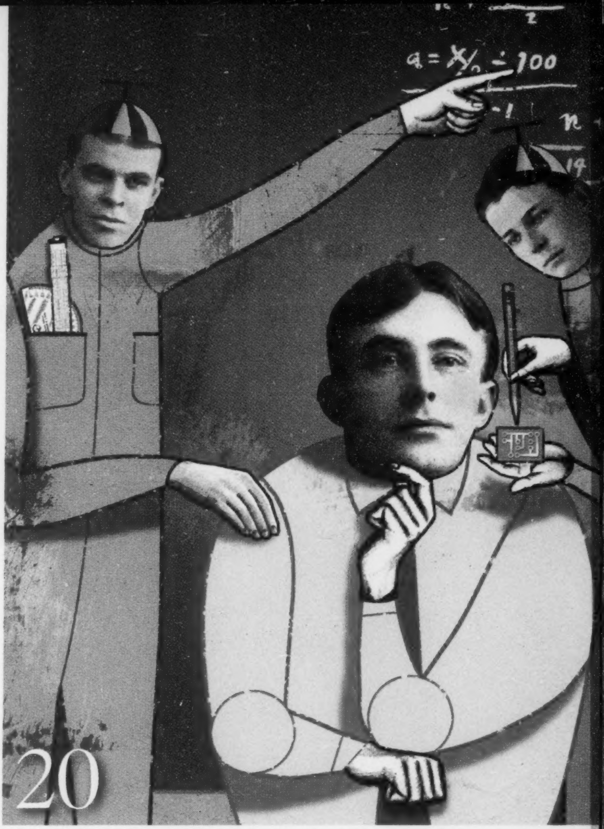

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COVER ILLUSTRATION BY PETER BENNETT

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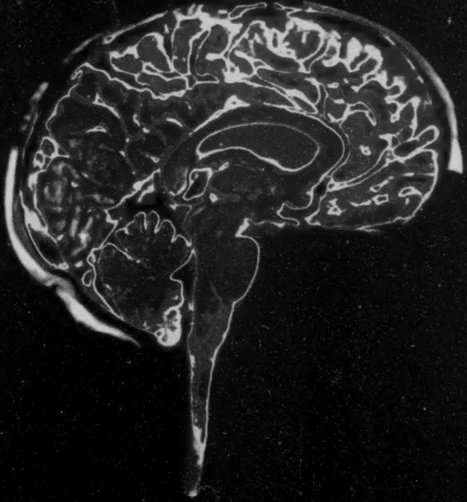

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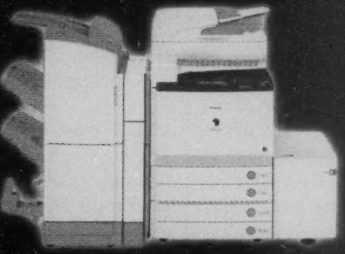

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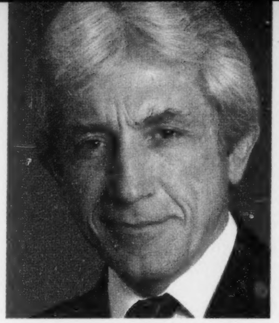
EDITOR'S NOTE

Don Tennant



The Back Story

LAST WEEK'S launch of the "Dear Aunt Donna" video series, in which our feisty resident agony aunt (my alter ego) did her shtick on our Web site and YouTube, got the reaction we fully expected it would. If one word could capture the thrust of that reaction, it would have to be "wow."

Of course, "wow" can mean a lot of different things. In this case, it seemed to translate to something like, "It's funny, but whoa. Where in the world did this come from? And how on earth did you get the CEO of Novell and these other people to play along by asking for advice in these video clips?"

The answer to the latter question is fairly simple. It turns out that many in the IT community — even corporate hotshots — have a better sense of humor than we often give them credit for. The answer to the former question is a little more involved.

"Aunt Donna" is a character I created in the mid-'90s when I was editor in chief of the Hong Kong edition of *Computerworld*. I used the character as a vehicle to address random current IT events in my weekly column. I would make up a question that was supposedly written by a real person (I ran a disclaimer making it clear that it was all fiction), and then Aunt Donna would offer her sage, typically sarcastic, advice.

For example, in 1997, when Oracle CEO Larry Ellison was trying his best to make a go of his Network Computer initiative and having some bad luck with it, we used Ellison's penchant for all things Japanese to poke a little fun at the situation:

Dear Aunt Donna,
I'm at my wit's end. I'm trying my best to prove to the world that network computers are the answer to all of our problems, but I keep shooting myself in the foot. A few months ago, I managed to fry a couple of NCs during a demo in Hong Kong, and just last week at Oracle Open World in Los Angeles, I tried another demo that completely backfired. Common sense tells me to give up and concentrate on software, but my samurai philosophy tells me to never surrender. What should I do?
— Trying to be Japanese

Dear Trying,
There's a lot more to being Japanese than decorating your house like a Kyoto tourist trap and selling little hardware gadgets. You need to stay focused, dear. Let Scott McNealy do the NC thing. He doesn't go around making databases look silly, does he?

And when we heard that former IBM CEO Lou Gerstner had pulled IBM's ads from *Fortune* because he didn't like an April 1997 profile piece the magazine ran, we let our readers know about it with an Aunt Donna offering that made a less-than-subtle reference to the fact that Gerstner was still taking some flak for his role as the former CEO of R.J. Reynolds:

Dear Aunt Donna,
Fortune *magazine recently published an article that claimed that I am arrogant and brusque. I hate it when people call me that! So I showed them! I pulled all of our advertising out of* Fortune*, which was something like $6 million a year.*
Now I'm afraid I will be perceived as an arrogant, brusque, spiteful, media-manipulating ogre, and of course I am none of those things. What should I do?
— Running amok in Armonk

Dear Running,
My, we certainly stepped in it this time, didn't we? THINK on the bright side, dear. You could be running a tobacco company! Then you'd really be in deep doodoo, and you'd be getting a lot worse press. And at least your hands are clean of that whole mess, right snookums?

Back then, of course, Aunt Donna only existed in print. But now that we're doing video, too, what better character to bring to cinematographic life? And getting high-profile CEOs to really take part is even more fun — as you'll continue to see. So stay tuned. ■

Many in the IT community – even corporate hotshots – have a better sense of humor than we often give them credit for.

Don Tennant *is editorial director of* Computerworld *and* InfoWorld. *Contact him at don_tennant@computerworld.com, and visit his blog at* http://blogs.computerworld.com/tennant.

ONLINE CHATTER

RESPONSES TO:

What Brain Drain?

April 21, 2008

In most companies, management consists of MBAs and their spreadsheets, all focused on making the next quarter's numbers. The last thing they care about is a problem they perceive as being years away, and they don't plan to be working for the same company then anyway.

Submitted by: *Anonymous*

The statement "It's mostly a young person's game" is misleading; the younger IT folks will repeat the mistakes of the past. And don't discount the value of the old fogies' ability to learn new technologies — they can (and do), and they can apply experience to use the new technologies more effectively. I rely upon my more mature teammates to point me in the right direction.

Submitted by: *TestKing*

Companies that ignore their older workers already obtain the consequences that flow from boomer retirements. You would be amazed how many wheels are being rediscovered. Very few people will accept a mentor, and how many people read the [stupid] manual?

From the perspective of the young, the wheel is NOT the same if the new wheel was made in Perl, PHP or Ruby on Rails and the old wheel was made in Cobol, Fortran or C. This is a tech-centric point of view, of course; executives still see a "wheel" and not realize the old wheel has 10 times the reliability and performance of the new wheel.

Submitted by: *Michael*

I have always had a problem with the Dept. of Labor and their statistics on age and workforce demographics. Since when is 55 the magic dividing line, with one foot on a banana peel and another in the grave? The demographics need to change because a lot of people where I work are well past 55 and just hitting their stride and show no intention on retiring anytime soon. Nobody is leaving, not even the oldest boomers!

Submitted by: *Lewis*

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Companies are finding ways to ensure that their technology investments result in both environmental benefits and a quick ROI.

Microsoft Admits It Sent Office Nag to WSUS Servers

Furious admins say their Office installs have been falsely fingered as fake through an antipiracy software initiative originally intended for limited distribution.

Which Religion Has the Best Cell Phone?

OPINION: Now you can get cell phones customized with services specific to your religion. Columnist Mike Elgan picks the three best devices.

Five Easy Ways to Commit Career Suicide

Putting down co-workers or burning bridges when you resign are surefire ways to darken your career prospects. Here's how to avoid critical mistakes.

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News Digest

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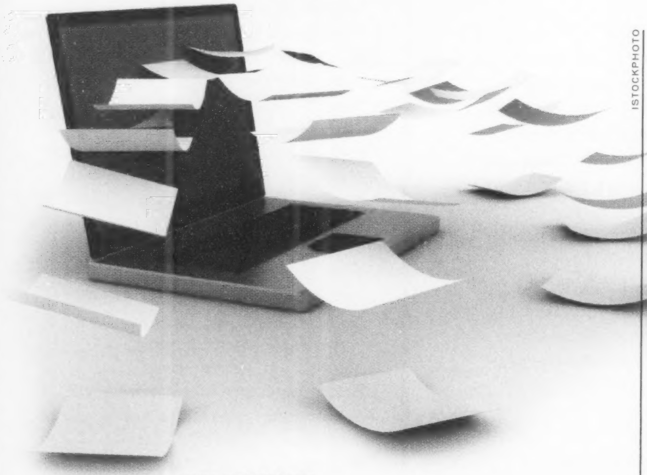
THE WEEK AHEAD

TUESDAY: Main conference proceedings and the trade show floor open at Interop Las Vegas 2008.

WEDNESDAY: IBM's Business Partner Leadership Conference starts in Los Angeles. The agenda includes speeches by IBM CEO Sam Palmisano and Google CEO Eric Schmidt.

THURSDAY: Microsoft begins the spring edition of its BlueHat security briefings, a two-day internal event featuring presentations by outside security researchers.



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DESKTOP APPLICATIONS

Microsoft to Embrace Streaming of Office to PCs, Sources Say

SOURCES SAID last week that Microsoft Corp. is arming a key cohort of its legion of business partners to help it fight the threat posed to Office by less-expensive or free online alternatives, such as Google Apps.

According to the sources, Microsoft plans to conduct a yearlong test that will enable Web hosting firms to use application-streaming systems to deliver Office 2007 to their customers.

The software vendor is expected to announce the test program and a modified licensing agreement at this week's Microsoft Management Summit 2008 in Las Vegas.

Starting in June, the sources said, service providers that pass a face-to-face interview with Microsoft representatives will be able to stream the Standard and Professional Plus editions of Office to end-user PCs.

A spokeswoman for the software vendor declined to comment. Microsoft already allows corporate users with Software Assurance maintenance contracts to stream Office and other applications internally, using its SoftGrid technology. But this would be the first time that it lets service providers using third-party streaming software do the same.

That's a big change for Microsoft, said Neil Gardner, a marketing vice president at application streaming vendor Endeavors Technologies Ltd. Microsoft "has been sensitive to whether it would cannibalize its own application business," Gardner said. "They were also sensitive to the piracy side of it — of losing control over distribution."

Office would be stored on the PCs it's streamed to and would maintain persistence after users log off. That "preserves the value of desktop apps and the fat desktop PC, which is very important to Microsoft," said Paul DeGroot, an analyst at Directions on Microsoft in Kirkland, Wash.

But some hosting providers said that based on Microsoft's tentative pricing, they wouldn't be able to offer Office Standard for less than $20 per user monthly — nearly five times higher than the technical support tab for Google Apps, which costs $50 per user annually.

"Microsoft can't be complacent," DeGroot said. "They've got to be willing to be aggressive on price."

— Eric Lai

SOFTWARE

Hosted CRM Service Targets Salesforce.com

Microsoft Corp. last week launched its long-expected hosted CRM service.

Microsoft said the hosted marketing and sales service, called Dynamics CRM Online, marks the start of an aggressive push to take on hosted CRM pioneer Salesforce.com Inc.

The Professional Plus edition for corporate use is priced at $59 per user per month. It includes 20GB of storage, offline data synchronization, 200 configurable workflows and 200 custom entities. The low-end Professional edition costs $44 per user per month. The service is available now.

Sheryl Kingstone, an analyst at Yankee Group Research Inc., said Microsoft must still work out "execution issues" and integrate its communications technology into the hosted systems.

– BRIAN FONSECA

> **"The market is going on-demand and into cloud computing.**
>
> **SHERYL KINGSTONE,** ANALYST, YANKEE GROUP

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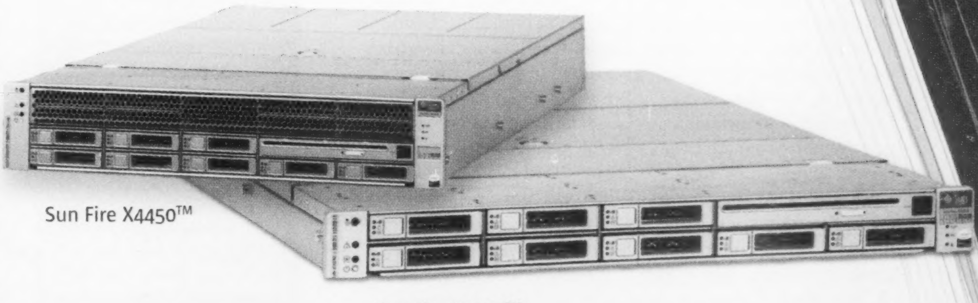

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Portland, Ore.

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MOBILE & WIRELESS

Municipal Wi-Fi Model Still Not Lighting Up

ANNOUNCED WITH fanfare in 2006, a municipal Wi-Fi project in Portland, Ore., has been stuck in a partially completed state since last September because the vendor building the network no longer views it as economically viable.

Meanwhile, the city councils of Corpus Christi, Texas, and Milpitas, Calif., voted this month to take over local wireless networks owned by EarthLink Inc., which is pulling out of the municipal Wi-Fi market.

The experiences of those three cities provide more evidence that the business model of using ads and subscription revenues to fund and then make money from Wi-Fi networks isn't working out for wireless vendors.

Logan Kleier, information security manager for the government of Portland, said last week that only about 20% of the city's planned Wi-Fi network is in place and that there are no imminent plans to complete it.

Developer MetroFi Inc. halted work on the network last fall after telling city officials that it had been unable to bring in the amount of revenue it had projected from online advertising sales and Wi-Fi access contracts with local businesses.

"MetroFi said that they want the city to pay for it," Kleier said. But that option wasn't acceptable to Portland officials, leaving the project dead in the water.

The network originally was scheduled to be completed by this August, with 95% coverage of indoor and outdoor spaces citywide.

But MetroFi CEO Chuck Haas said it has become clear that municipal networks need multiple revenue streams. He added that MetroFi proposed an expansion of the Portland Wi-Fi network to include paid wireless services for police, fire and other municipal departments, plus surveillance cameras and traffic control technologies. Haas said he thinks the city will get there at some point, "but just not on the timeline we need to complete the network."

The finished portion serves about 15,000 users per month and supports itself through online ads and related revenue, Haas said.

— Todd R. Weiss, with Stephen Lawson of the IDG News Service

Short Takes

Dell Inc. said that it plans to shut down its Ottawa customer service center as part of its effort to cut $3 billion in costs over the next three years. About 1,100 employees will be laid off.

Sun Microsystems Inc. has confirmed that it acquired microprocessor start-up **Montalvo Systems** for an undisclosed sum. Sun said it plans to use the Santa Clara, Calif.-based company's low-power chip technology in future Sun processors.

After battling start-up woes, **Psystar Corp.** said it is now shipping its clones of Macintosh personal computers. The company's challenges included a blackout of its Web store, the loss of a credit card processor, and criticism from bloggers.

Microsoft Corp. disclosed late last week that it has sold 140 million licenses of Windows Vista since the November 2006 launch of the troubled operating system. The company did not break out the number of corporate licenses.

HARDWARE

IBM Builds Server to Run Web 2.0-Heavy Sites

IBM last week unveiled a new type of rack-mounted server for companies running heavily trafficked Web 2.0 sites.

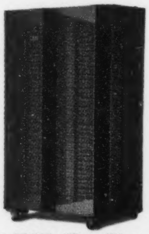
The server, called iDataPlex, is designed to compete with unbranded "white-box" PCs that online firms link by the thousands to run busy Web sites.

IBM said that through a new cooling process, the system consumes 40% less power than typical models.

Gregg McKnight, chief technology officer of IBM's modular systems group, noted that the new rack servers are 15 in. deep, compared with about 25 in. for a typical system, which "allows us to run fans at a much lower velocity, [saving] about 67% on fan energy alone."

In addition, an optional water-cooling system can remove all the heat generated by the servers and blow cold air into the data center, said Jim Gargan, vice president and business line executive in IBM's System x unit.

A fully loaded system – 84 iDataPlex servers with networking and other components – costs about $150,000, IBM said. It will be available in June.



IBM's iDataPlex

The new system will compete with the homegrown clusters of x86 servers, and with products from Verari Systems Inc. and Rackable Systems Inc., said independent analyst Joe Clabby. "They proved the concept," he said. "Now the 500-pound gorilla has landed on their doorstep."

– PATRICK THIBODEAU, WITH JAMES NICCOLAI OF THE IDG NEWS SERVICE

DATA CENTERS

Data Center Firm Looks To Harness Wind Power

PHOTO COURTESY OF GE ENERGY

« General Electric 2.5 MW Series turbines might be used in the Fall River data center development.

A DEVELOPMENT FIRM that plans to build a data center in Fall River, Mass., is looking to install a pair of large wind turbines — potentially as tall as 25-story buildings — to help generate the electricity needed at the facility.

On April 17, local developers Roland Patenaude and Karen Charette won approval from the zoning board in Fall River to set up two wind turbines as tall as 300 feet.

If the effort to build the 120,000-square-foot data center on a 4.5-acre parcel of land goes ahead as planned, the turbine installation would likely be one of the largest of its kind in a U.S. city — if not the largest.

Granite Block Global Data Center Inc., the company formed to build the facility, will offer raised floor space to commercial customers in Fall River, which is about 50 miles south of Boston.

Patenaude, who hopes to open the data center within two years, estimated that its monthly electricity bill will be more than $1 million. The wind turbines could reduce that tab by 20% or more, he said, adding that he would install as many as eight turbines if he had more land.

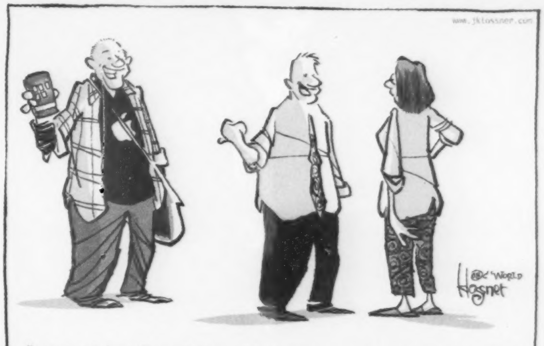
Tom Gray, a spokesman for the American Wind Energy Association in Washington, said he doesn't know of any data centers that are using turbines now.

Gray said wind turbines make a "swishing" sound, which can be a problem if they're too close to residences. But he added that for people "who live 1,000 feet away, they're no louder than a kitchen refrigerator."

— Patrick Thibodeau

BETWEEN THE LINES

By John Klossner



"USING AVAILABLE PARTS, WE'VE BUILT A MAC FANBOY CLONE."

BENCHMARKS LAST WEEK

Microsoft Corp. began delivering Windows Vista Service Pack 1 to users who have enabled the Automatic Update feature on their PCs.

Two weeks after **Corel Corp.**'s majority owner offered to buy the rest of its shares, Corel said that CEO David Dobson is resigning to take a job at an unidentified company in the U.S.

FOUR YEARS AGO: President Bush described paper medical records as "antiquated" and called for widespread adoption of electronic records that can be transmitted between health care providers by 2014.

Global Dispatches

EU Parliament OKs Satellite Project

BRUSSELS – The European Parliament last week approved the Galileo satellite navigation system, clearing the way for the European Union's most ambitious technology project.

The parliament's approval was the final hurdle for the €3.4 billion ($5.4 billion U.S.) Galileo system, a joint development effort of the EU and the European Space Agency.

Parliament member Etelka Barsi-Pataky noted that the effort marks "the first infrastructure in Europe that is commonly built and jointly owned."

In a statement, the parliament said that work on the system will start this year, once contractors are selected.

Galileo, which is similar to the U.S. government's Global Positioning System, is due to be deployed by 2013.

Paul Meller,
IDG News Service

Aussie Utility, CSC Ink Services Deal

PERTH, Australia – Western Power, an electric utility owned by the Western Australian government, has signed a three-year IT services contract valued at $15.4 million Australian ($14.5 million U.S.) with Computer Sciences Corp.

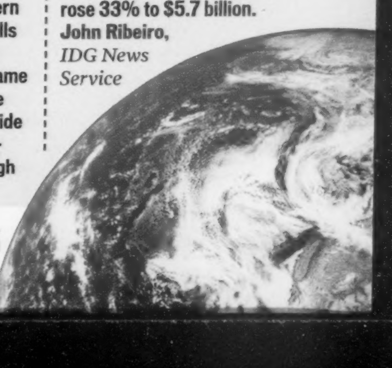
The first IT outsourcing contract awarded by Western Power, the deal calls for Falls Church, Va.-based CSC to migrate the utility's mainframe processing to its Melbourne mainframe center and provide support services to the utility. Western Power CIO Leigh Sprlyan said the Perth-based utility selected CSC in part for its consumption-based pricing model, which requires payment only for mainframe capacity used.

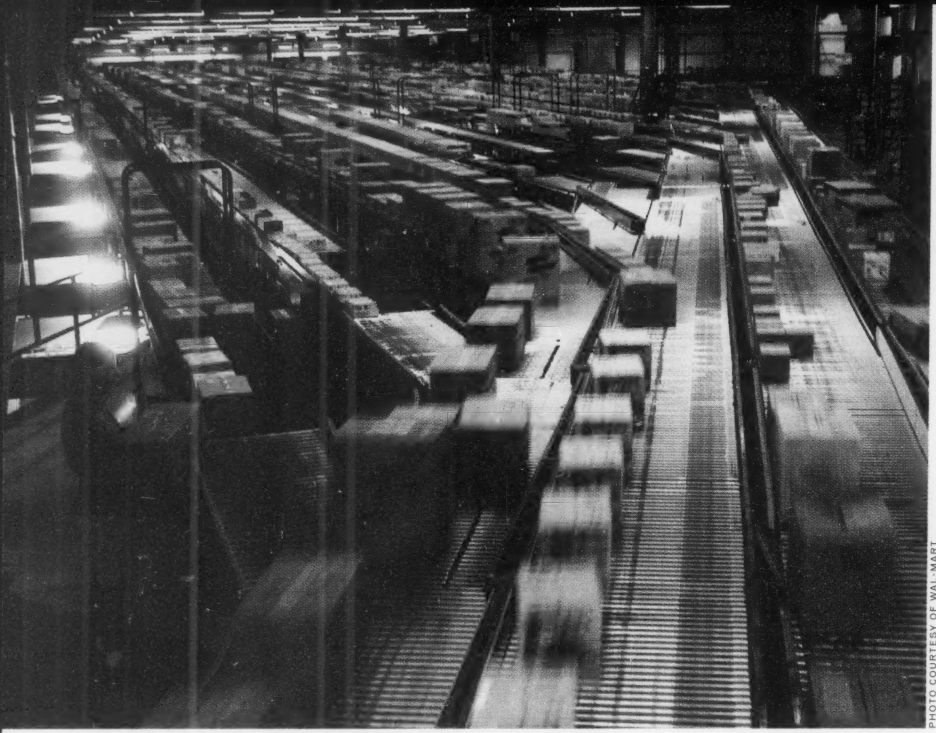
Sandra Rossi,
Computerworld Australia

BRIEFLY NOTED

India's largest outsourcer, Tata Consultancy Services Ltd., blamed an uncertain U.S. economy for lower-than-anticipated revenue and profit growth in its fiscal year that ended March 31. Nonetheless, Tata said its profits rose 32% from the previous year to $1.25 billion (U.S.) as sales rose 33% to $5.7 billion.

John Ribeiro,
IDG News Service





« Wal-Mart unit Sam's Club recently announced an RFID plan for its distribution centers.

PHOTO COURTESY OF WAL-MART

Some Suppliers Gain From Failed Wal-Mart RFID Edict

Daisy Brand and TI credit the long-delayed plan for their launch of successful programs. **By Sharon Gaudin**

FIVE YEARS ago, when Wal-Mart Stores Inc. issued a startling mandate that its suppliers must adopt radio frequency identification technology, Daisy Brand Inc. quickly volunteered to be first out of the gate.

Today, the family-owned dairy products supplier is fully compliant with those Wal-Mart requirements, tagging every pallet that leaves its warehouses. The effort has been a boon to Dallas-based Daisy Brand, cutting in half the time it takes to load its delivery trucks.

But Wal-Mart's mandate didn't work out so well — or even work out at all — for most of its other suppliers. The retail giant says that many of its 600 top suppliers, which account for three-fourths of the company's sales volume, use RFID technology today to "some degree." Most of the rest — some 60,000 strong — are not using it at all.

Once the implementation difficulties for its suppliers — and for Wal-Mart itself — became clear, the retailer backed away from the RFID mandate, which remains in limbo today.

For many of the small and midsize businesses that make a good chunk of revenue selling products to Wal-Mart stores around the country, the long-term benefits of RFID are still not top of mind, but the expense is.

While analysts bicker over exactly how much it costs to implement RFID technology, there's a general consensus that a small supplier would have to spend between $15,000 and $20,000 just for the tags, readers and middleware needed to get started. Add the cost of planning, training and handling all the new information compiled by RFID systems, and the price keeps escalating.

Such a significant expense, especially for suppliers that may still be struggling to get bar codes in the right places, is a lot to ask to keep just one customer happy — even one the size of Wal-Mart.

"Without the clarity of immediate benefits, the majority of suppliers are willing to risk not being the perfect trading partner," said Roy Wildeman, an analyst at Forrester Research Inc.

It all started back in 2003, when Wal-Mart first announced that its suppliers would have to tag crates and pallets. At the time, Wal-Mart mandated that its top 100 suppliers would have to complete the move by January 2005.

Bentonville, Ark.-based Wal-Mart was the first major retailer to demand that its suppliers use RFID technology. The move meant that companies were suddenly confronted with learning the new technology — and paying for it.

While some suppliers, like Daisy Brand, quickly jumped on board, most were less amenable to the plan.

Part of the problem was that the plan was unveiled before the RFID industry was ready for it, users and analysts said. There were no standards, the technology was in its infancy, prices were high, and fly-by-night vendors and consultants littered the industry.

"Gosh, if [someone] could spell 'RFID,' it seemed they thought they could hang out a shingle," said Tom Shields, educational technology service and RFID manager at Texas Instruments Inc. (TI), which became compliant with Wal-Mart's requirements in January 2006.

He noted that after Wal-Mart issued the RFID mandate, "there were [suppliers] hemorrhaging money to become compliant." Most were shooting in the dark, trying to implement the technology without having any examples to follow, Shields said.

At the same time, Wal-Mart needed to get its own RFID house in order, according to some analysts.

For example, the company was slow to install RFID equipment in its own stores. John Simley, a Wal-Mart spokesman, said that at least some RFID technology is used in 1,300 of about 3,600 U.S. stores today. Most have full implementations, though some are just getting started, he noted.

The retailer won't comment on whether it plans to resume the program, or discuss a schedule for installing RFID technology in the remaining Wal-Mart stores.

John Fontanella, an analyst at AMR Research Inc., also noted that Wal-Mart disbanded an internal RFID program office in the months after the mandate, transferring responsibility for the program to a general operations department. Simley declined to discuss the office.

"I think they were very visionary for [seeing] the potential for RFID, but the infrastructure to support that vision was still being built," Shields said. "The lack of infrastructure, the cost and all the troubles created the perfect storm" that slowed RFID adoption, he noted.

Although Wal-Mart's mandate has been abandoned at least for the time being, it has led to some successful RFID implementations.

For example, TI has been tagging pallets and cases of goods shipped to Wal-Mart for two years. And Shields said the company is ready, should other major retailers, such as Target Corp., move to RFID.

Shields credited TI's patience for its successful implementation of the Wal-Mart RFID program.

The electronics provider researched options for implementing RFID for 18 months before spending a single dollar on equipment, he said. The company now tags only shipments headed to Wal-Mart, thus minimizing RFID hardware investments.

In addition, the price of RFID equipment dropped considerably during the evaluation, further reducing start-up costs, Shields noted.

Shields also said that TI created an RFID study team with employees from IT, supply chain operations, field sales and the finance department, letting each part of the organization feel invested in the project.

"We were compliant for under half a million dollars," said Shields. "We were meeting our customer's requirements. That's what business is. You can't always measure it as ROI. Part of it is more of an ROR — a return on relationship."

Meanwhile, Daisy Brand has extended the RFID efforts undertaken for Wal-Mart into other parts of its business.

Kevin Brown, director of information systems at Daisy, said the return-on-investment criteria weren't based meeting a single customer's requirements, but on how the technology addressed the supplier's own business needs.

"If you don't do anything with [RFID for yourself], the payback period is obviously going to be longer," Brown added.

"If you don't do anything with [RFID for yourself], the payback period is obviously going to be longer.

KEVIN BROWN, DIRECTOR OF INFORMATION SYSTEMS, DAISY BRAND INC.

Five months after Daisy became compliant with Wal-Mart's edict, an entire inventory management system based on pallet tags had been implemented. As goods move through facilities, workers don't have to take notes, since all pallets are tracked by RFID readers.

A SECOND CHANCE

The experiences of Daisy Brand and TI could provide helpful lessons to small and midsize suppliers, should Wal-Mart revive its mandate.

And analysts say that the recent launch of an RFID program at Wal-Mart unit Sam's Club, a warehouse retail chain, could signal an imminent resumption of the program.

Wildeman noted that more than half of Sam's Club's suppliers are also Wal-Mart suppliers. "If you're asking a large portion of those same suppliers to start tagging to avoid a penalty, is that a step in the overall Wal-Mart journey to get its suppliers to be compliant?" he asked.

Sam's Club announced its plan on Jan. 7 and ordered that tags be attached to all pallets shipped to its DeSoto, Texas, distribution facility by Feb. 1.

Other distribution centers will come online as part of a graduated rollout over the next two and a half years.

Simley noted that untagged pallets that arrive at distribution centers after deadlines will be tagged by Wal-Mart employees. The suppliers will be charged a $2 fee per missing tag, which could quickly become a major expense.

Meanwhile, the fully equipped Wal-Mart stores have RFID readers installed in receiving bays to keep track of shipments and in so-called transition areas to monitor products as they move from the storage room to the store floor, where workers use handheld readers.

At those Wal-Mart locations, the program seems to be working, according to a report released last month by researchers at the University of Arkansas in Fayetteville.

The study of 16 Wal-Mart stores last year showed that RFID technology improved inventory accuracy by 13%, compared with stores that lacked the technology. The study determined that the overall savings can be "measured in millions of dollars."

"There have been speed bumps . . . but I don't think for a second that Wal-Mart is walking away from their RFID commitment," Fontanella said. "They'll slowly tighten things down in terms of compliance." ■

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Paying Breach Bill May Not Buy Hannaford Full Data Protection

The grocer is spending millions of dollars on new IT security tools. But they might not have prevented the theft of payment data from its systems. **By Jaikumar Vijayan**

HANNAFORD BROS. Co. said last week that it expects to spend "millions" of dollars on IT security upgrades in response to the recent theft of up to 4.2 million credit and debit card numbers from its systems.

Some of the new measures that the grocer outlined go beyond the controls mandated by the Payment Card Industry Data Security Standard, or PCI. But it isn't clear whether they actually will address the issues that led to the data breach.

The planned upgrades include the installation of intrusion-prevention systems on Hannaford's corporate network and the systems at its stores, plus the deployment in checkout aisles of new PIN entry devices with Triple DES encryption.

Hannaford also said it has signed IBM to do around-the-clock network monitoring, and the Scarborough, Maine-based grocer vowed to encrypt all payment card data on its internal network. The goal, Hannaford CEO Ronald Hodge said during a press conference, is to put "military- and industrial-strength" security controls on the company's systems.

The level of encryption that Hannaford has in mind isn't required by the PCI rules, which specify that card data needs to be encrypted only if it's being transmitted across open public networks.

Despite the lack of more-stringent requirements, encrypting card numbers on point-of-sale devices is "the most significant action" that retailers can take to stop attacks such as the one that hit Hannaford, said Gartner Inc. analyst Avivah Litan.

But that doesn't necessarily mean that the new security measures will make Hannaford — or other companies that follow its lead — immune to future attacks.

Jim Huguelet, an independent PCI consultant in Bolingbrook, Ill., praised some of the steps Hannaford is taking, including an earlier decision to replace all of the company's store servers. As part of the breach, malware was placed on the systems and then used to intercept the payment card numbers.

Huguelet said that the planned end-to-end encryption of card data also sounds good — on paper. But to make the data hacker-proof, he added, it would have to be encrypted from the PIN entry devices in stores to the systems of the payment-processing firm that authorizes card transactions.

And because almost no payment processors accept encrypted data at this point, Hannaford would likely need to convince the firm it works with to make system changes as well. "It's a tricky thing," Huguelet said.

Similarly, Hannaford's decision to replace all of its existing PIN entry devices puts it ahead of the curve in meeting a PCI mandate that companies must start using models with built-in support for Triple DES by July 2010.

But in most cases, the Triple DES technology encrypts only a customer's PIN, according to Huguelet. So even if Hannaford was already using such devices, it's unlikely that they would have prevented the card numbers from being compromised, he said.

Litan views Hannaford's plan to bolster its network defenses via the use of intrusion-prevention systems as another step in the right direction. But she said there are indications that the breach may have been the handiwork of a rogue insider — in which case the intrusion-prevention tools probably wouldn't have helped stop the attack.

Hannaford has said it was compliant with the PCI rules when the breach took place between Dec. 7 and March 10. But CIO Bill Homa said last week that the upgrades are aimed at strengthening the grocer's "deterrence, prevention and detection" capabilities.

The unanswered question, though, is whether that will put up a wall strong enough to keep future attackers out. ■

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On the Mark

HOT TRENDS ■ NEW PRODUCT NEWS ■ INDUSTRY BUZZ BY MARK HALL

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AREN'T YOU JUST THE CUTEST?!
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MATTHEW FAULKNER

Save CBL, Don't ABBRVI8

IBM ESTIMATES that more than 30 billion transactions occur within Cobol programs every day. In contrast, Google averages about 150 million searches each day, or about 0.5% of Cobol's daily workload. No one worries about Google (well, maybe stockholders who bought their shares north of $700), but people still fret about Cobol's future.

To set the record straight about Cobol's usefulness, Micro Focus Ltd. in Newbury, England, has published a list of "misconceptions" about the hoary language. Craig Marble, senior solutions engineer at Micro Focus, doesn't want enterprises that are embarking on service-oriented architecture projects to exclude Cobol from their development plans in favor of "sexier" languages. SOA, he says, "brings Cobol up to the same level as .Net and Java."

1959

The year Common Business-Oriented Language (Cobol) was created.

Too often, Marble argues, SOA developers simply screen-scrape data and overlook the vital business logic behind it. He says that because so many Cobol apps are built on complex business rules, screen-scraping for Web apps can slow response time to a crawl. By bringing Cobol into the SOA effort in the beginning, he claims, you can create Web services that execute within the Cobol back-end environment, with results handled by Java or .Net on the front end.

Cobol is ideal for creating business rules because it is an English-language-based programming tool, Marble says. Even business analysts can read extant business logic in Cobol, he adds.

And that raises another concern, contends Jerry Sitner, a Cobol consultant in New York. He says Cobol's clearness has been subverted by management. Sitner argues that as managers pushed developers to crank out code quickly, developers undermined the value of English in Cobol by introducing abbreviations. For example, rushed developers would shorten "Patient" and "Medicare" to "Pat" and "Med" for fields in a Cobol program, making it difficult for anyone else to know what was meant.

Sitner doubts those business analysts Marble refers to will have an easy time decoding hasty abbreviations. He's on a one-man mission to fix what he calls "broken Cobol." You can call him at (212) 254-3358. Maybe he can help your organization speak Cobol more fluently.

Eyeball Web Apps Without Spying

Hon Wong poses an interesting question regarding Web application performance: "How do you monitor from the eyeball?" In other words, how do you know what end users are experiencing from your application if they don't (and they overwhelming do not) let you install a performance-monitoring agent? The answer, says the CEO of Symphoniq Corp. in Palo Alto, Calif., is with his company's software, TrueView.

TrueView injects a few lines of HTML code in each Web page and calls a temporary JavaScript program that monitors the performance of the app. Because the JavaScript monitors only its app and doesn't remain on the end user's machine after the session is over, Wong says the product is not spyware. He claims that the TrueView injection adds less than 3% of overhead to Web page response time. TrueView also has probes, or agents, that reside on all of the tiers in your application, so you can trace app performance end to end. Wong adds that TrueView is also an ideal tool for testing Web apps before they go into production. One drawback: TrueView works only with Internet Explorer and Firefox browsers. But TrueView 2.0 adds support for Flash-, AJAX- and Silverlight-based Web applications. Pricing starts at about $20,000. ■

Wong: Know how Web users experience your online app.

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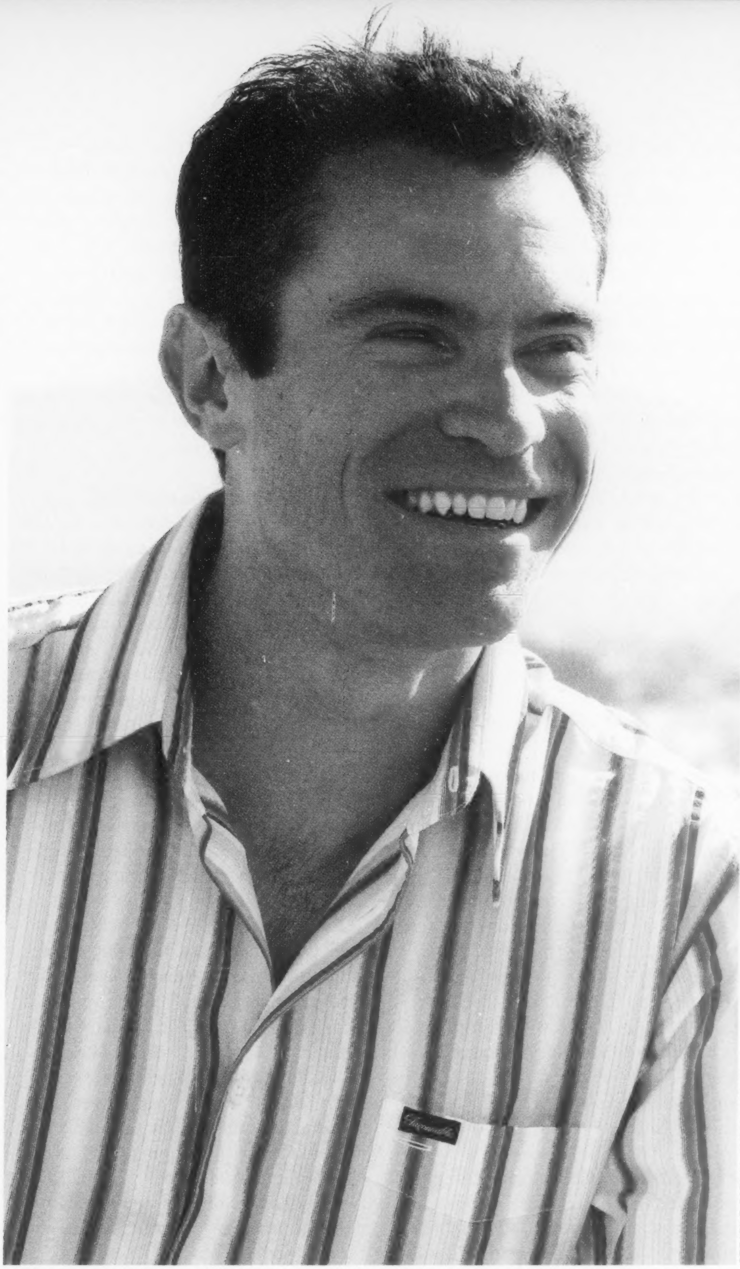


CREATIVE CARMEL PHOTOGRAPHY

■ **THE GRILL**

David Rice

The **author of *Geekonomics*** talks about rating **software**, putting a value on **vulnerabilities** and charging vendors for **security bugs**.

Dossier

Name: David Rice

Title: President

Organization: Monterey Group

Location: Monterey, Calif.

Previous job: Global network vulnerability analyst at the National Security Agency

Hobbies: Yoga and surfing

Favorite technology: "I really like mobile devices for the autonomy and the freedom they give me – but outside of the security context, in which they are a disaster."

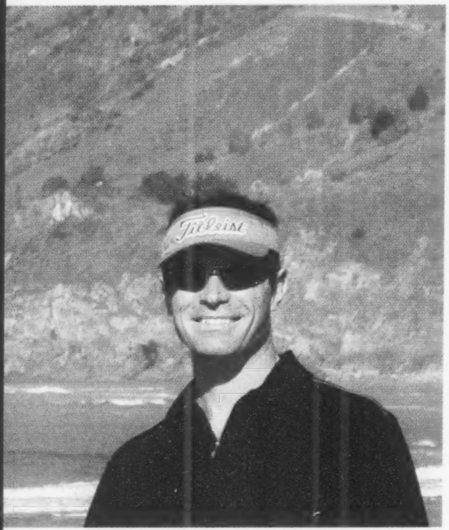
Pet peeve: The tendency to always use technology to try and solve the security problem. "What we are doing now doesn't change the landscape from an information security perspective. It just adds more entropy to the system."

Little-known fact: The original name for the Monterey Group was the Tantric Group. "I think it had something to do with my yoga."

In his new book, Geekonomics: The Real Cost of Insecure Software *(Addison-Wesley Professional, 2007), David Rice says that badly written, insecure software products are hurting people and costing businesses and individuals billions of dollars every year. Yet far from being penalized for it, he says, the vendors of these products have been rewarded with greater market share and profits because of a shocking lack of accountability in the software industry.*

You say that software products in general have had largely detectable and preventable security defects from the beginning. Why aren't there incentives for vendors to make their products more secure? In the software market, we have this problem of asymmetric information, which means [buyers don't] always know what they are getting. Basically, they cannot distinguish between high- and low-quality software.

Software manufacturers are doing what any manufacturer would do. It is not like they are deliberately trying to make crappy software. They are just



> **"You can have 'Trustworthy Computing' or 'Unbreakable,' but [when software has defects, vendors] just kind of shrug their shoulders. There's no punishment for being wrong.**

trying to maximize profits. They really don't have any meaningful incentive to look out for you. So you can have "Trustworthy Computing" or "Unbreakable," but they just kind of shrug their shoulders. There's no punishment for being wrong.

How do you induce software vendors to write more-secure software? We need to make it more expensive for people to produce low-quality software. Most of us want security in our software. We just can't distinguish when it isn't there. So it is very difficult for us to price it.

How do you price vulnerabilities? One mechanism is to price vulnerabilities like you price carbon emissions. So you can say that for anything a US-CERT or someone like that identifies as a vulnerability, you are going to get taxed a certain amount. All of a sudden you have an incentive, because vendors have to pay for the cost of emission. Costs that have never been associated with their product now have to be accounted for. Any good company would say, "I need to reduce my production costs." But the cost of fixing the vulnerability has to be less than the price of the vulnerability. What we get then is a pretty good situation, because the vendor [and] the market can price security, and so can the consumer.

The complexity comes from the fact that all vulnerabilities are not equal. Some are not so serious; some are absolutely critical. But the model is an interesting thing to explore.

What do consumers need to know about software security? Security has to be made more visible in some way. Right now, it isn't. The quality or safety of a vehicle isn't all that obvious to a buyer either. So the National Highway Traffic Safety Administration has assigned a five-star rating system for vehicles. A consumer can walk up to a car and say, "Five stars are better than four stars." That has made safety more visible to consumers, so they can price it. That means that it is actually more expensive for a manufacturer to produce a low-quality car, because they are not going to sell as many cars as a five-star manufacturer.

With software, [the situation] is completely inverted. It is incredibly inexpensive for me to make a low-quality product and get rewarded for it by the market, because no one can distinguish good-quality software in the market.

What would a five-star rating system look like in the software context? It still needs to be worked out. Software is more complex. What is required is some sort of an objective measurement. It doesn't have to be a five-star rating. It just has to be some consistent and measurable information source.

Why hasn't that happened yet? When we look at the auto manufacturer market, it wasn't just government regulations that compelled auto manufacturers to change. It was the removal of the doctrine of privity. Auto manufacturers distributed their cars to dealers, who then sold the cars to consumers. The doctrine of privity shielded the manufacturer from liability.

When you look at the software industry right now, the shielding from liability is almost unprecedented. If you buy software, you are left literally holding a huge bucket of risk. Almost all liability is the buyer's.

Who needs to take the next step? You are probably going to see some furtive steps on the part of government. In general, they have done a good job of informing manufacturers that these are the sort of practices [they] want you to follow. Maybe a little more tort action [will happen] when people start realizing that the liabilities being imposed on them are really unreasonable. It took probably 20 years [from] the first attacks on the doctrine of privity [to] when the doctrine was finally removed in the auto industry. So you are probably going to see the same kind of really slow growth in the software industry as well.

Can't government use its buying power to force software vendors to make their products more secure? When you look at the global IT market, you are looking at a total expenditure of about $1 trillion annually. If all of government brings their buying power together, that's about $70 billion. In the larger scheme of things, that is under 10% of the market. There are still plenty of other buyers that software vendors can go to. So you have to bring more weight to bear.

What is the take-away in all of this? We have to invert the market and make it more expensive to create bad software. How we go about it is through a combination of licensure on software developers, tort liability, maybe a little bit of government intervention, maybe directly in terms of some sort of pricing mechanisms like [for] carbon emissions. There is no really clear path forward. Maybe the problem is there are not enough smart people talking about it.

— Interview by **Jaikumar Vijayan**

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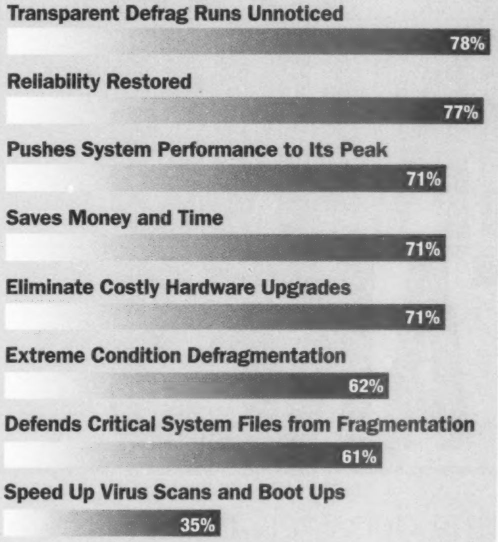

Thanks to all our customers who participated.

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"The server automatically defragments only when there are idle resources. No more worrying about when I can schedule defragmentation, no more worrying about if the defragmentation will cause performance issues. InvisiTasking™ has worked great for us on everything from file and print servers to SQL servers."

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"I have been using Diskeeper at my office on the 63 workstations and 4 servers over the last year. The addition of Frag Shield™ 2.0 eliminates the task of manually changing the MFT. In the past most of my MFTs needed adjustment. Now that this function is automatic, I don't have to manually check it."

5. SAVES MONEY AND TIME

"Prior to installing Diskeeper, we were manually defragmenting. Some of the drives would take hours to defrag and within a few days we would need to defrag again. Installing Diskeeper basically paid for itself within a month by reducing off-hour salaries. Also the defragmented drives perform better and last longer. It's a no-brainer for production machines."

6. SPEED UP VIRUS SCANS AND BOOT UPS

"Diskeeper saves time in doing virus scans, backing up, indexing and searching the files. There are also faster download times for users because of the lower load on the defragmented RAID."

7. EXTREME CONDITION DEFRAGMENTATION

"One day our SQL Server came to a halt. I did everything: ran spyware software, deleted numerous .TMP files, ran Windows® update, etc. But nothing got the server to run. Then I installed and ran Diskeeper; I found that the hard drive was horribly fragmented. But after Diskeeper finished defragging the system, the server came up."

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IT'S TOP FIVE TRAINING MISTAKES

Let's face it: Training debacles aren't always the users' fault. **By Beth Stackpole**

YOU JUST ROLLED OUT Windows Vista companywide, only to find your help desk flooded with calls. Or you spent hours with the mobile sales group going over the basics of laptop and wireless security, only to discover team members still opening rogue e-mail attachments.

Sound familiar? The problem could be in your training.

Given the increased corporate emphasis on return on investment, the pressure is on to get users comfortable and productive on new systems quickly. Though it's natural for IT to cast blame on users when they fail to embrace new or upgraded systems, IT should also consider its own role in training debacles.

A good training program should count as a competitive advantage, but "companies don't yet fully value training," says David S. Murphy, founder of the nonprofit International Association of Information Technology Trainers, a.k.a. ITrain.

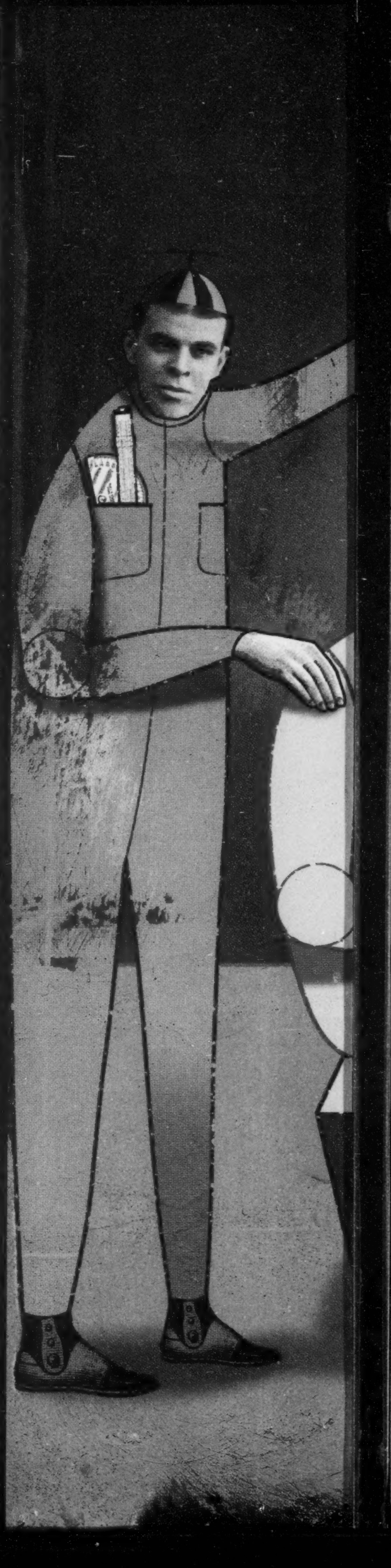
That may be true in part because training is rarely done well. We talked to IT managers, trainers, industry advocates and academics to uncover the top five mistakes IT pros make when they train users.

1 TRAINING IS AN AFTERTHOUGHT.

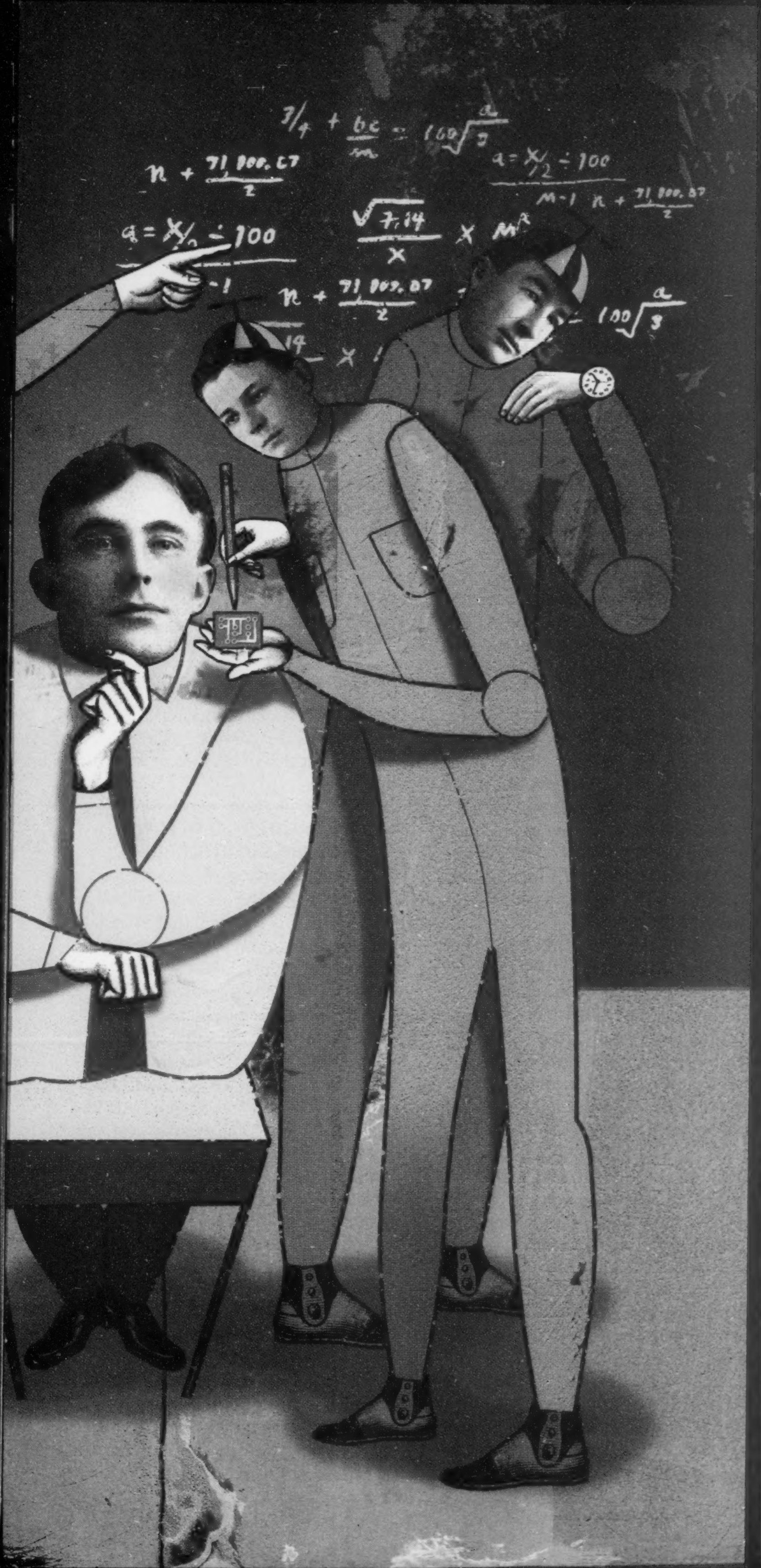
IT budgets have been under close scrutiny for years, and the dollars earmarked for training have been among the hardest hit, says Murphy. As a result, many companies don't factor training into the total cost of system rollouts and are left scrambling for resources at the end of the deployment.

Consensus in the industry dictates that a good training program should account for 10% to 13% of the total project budget, yet most companies underestimate the resources required, according to Pat Begley, vice president of learning solutions at RWD Technologies Inc., a professional services company that does user training. "Many times, organizations feel they have the bandwidth within the IT team to do the training, but they don't realize how tied up those people are going to be," she explains.

Companies also frequently fail to



PETER BENNETT



plan for training after the initial deployment, says Weston Morris, chief architect at Unisys Corp.'s strategic programs office for Microsoft products. After a time on a new system, users typically advance to more sophisticated functions, but training often doesn't cover that. As a result, says Murphy, users are left to muddle through on their own, and their companies lose some of the business benefits for which they purchased systems in the first place.

2 YOU'RE OUT OF TUNE WITH YOUR AUDIENCE.

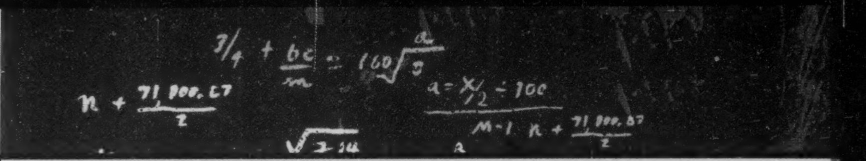
For training to be effective, it's not enough for the instructor to have mastery of the material. He also needs to be able to connect with the audience and present information in an interactive and engaging manner. But IT professionals aren't known for their communication skills.

"Just because someone is an expert in a subject and their passion is technology, that doesn't make them a good trainer," Murphy says. "We tend to put subject matter experts in training positions. We should be putting people with expertise in education and adult learning into those positions."

"Lots of times, IT won't tell people what they need to know, or they give people a long, technical explanation which is not meaningful, and then they've lost the audience," says Mary Kelley, president of Intelligo Inc., a Denver-based firm that provides user training and support for ERP systems.

Indeed, one of the biggest mistakes IT professionals make when preparing training is not adequately assessing the needs of their audiences. "We don't take the time before we design a training program to interview both the people who will be trained and their supervisors or managers," Murphy explains.

Interviewing employees before creating a training curriculum is critical, he maintains, because that's the only way for trainers to get a true sense of the skill level of the user group. Bringing supervisors into the interview process is equally important, because they have a broad perspective on what has and hasn't worked before for their direct reports. In addition, supervisors often have specific goals in mind for the training, Murphy says.



3

YOU DIDN'T FOLLOW STANDARD TRAINING MODELS.

Training a user community to work with a major business tool, like an ERP application, or a new operating system, like Windows Vista, involves a lot more than showing employees how to navigate a new desktop or run a specific report. Major system upgrades mean major upheaval in the way users work, and technology training should help users embrace those changes.

"Users need to feel comfortable with change. They need to know what's happening and how it affects their role," a concept the training community refers to as "organizational readiness," says Begley.

Unfortunately, IT often comes at things from a different angle. "IT doesn't typically consider organizational readiness as part of the training," she says. "They typically look at building competency."

For their part, professional training companies stress the importance of formal learning models — that is, best practices for teaching different kinds of learners — as critical to a training program's success.

RWD's learning methodology, for example, includes a preparation component that tells users what to expect and explains the specifics of how business processes will change; a run-through of what the new transactions will look like; a "try-it" phase, where users can test-drive the system prior to going live; and a support stage, during which help is accessible on an ongoing basis. IT's skills are focused on the run-through stage of training, but not the other areas, Begley says, and that can result in less-than-effective training.

Standardization in training materials is another area where IT often falls short. Users need multiple reference points for learning a system, notes Intelligo's Kelley, be it step-by-step instructions, quick reference cards or Web-based training. That material should be delivered and maintained in a standardized way.

A HARD LESSON LEARNED

UNISYS CORP. learned about the importance of upfront planning the hard way several years back during a companywide rollout of Windows XP and Microsoft Office 2003. At the time, the company didn't have a prerollout training program in place for the software.

As a result, Unisys University, a companywide training group, didn't partner with IT to deal with training issues until after the software had landed on people's desktops.

"There was a flurry of calls about 'How do you do this?' " recalls Weston Morris, chief architect at the company's strategic programs office for Microsoft products. "It was an expensive proposition."

But Unisys learned a valuable lesson that it is applying during its current rollout of Windows Vista to more than 30,000 users – a project that began this month and will continue through 2009. Unisys University and IT are again jointly handling the Vista training, but this time around, training is beginning before the software hits the desktops, Morris says.

The initiative includes the following:

- **A collaborative effort with the Unisys early-adopter community to identify common trouble spots for users.**
- **Creation of customized training exercises that will address the concerns identified.**
- **A program requiring users to complete Vista training and get certified *before* they're upgraded to the new operating system.**

"We want to make sure [users] have a basic understanding of the technology so they're not going to be calling the help desk with silly questions," Morris explains.

– BETH STACKPOLE

4

YOU'RE TRAINING OUT OF BUSINESS CONTEXT.

IT may be comfortable with instruction on the details of how to use a particular CRM package or how to securely configure a laptop or wireless network, but the training often stops there. What's missing are lessons on how to use that new system to augment traditional work patterns. To provide those, IT trainers need to understand business functions such as marketing and procurement — knowledge they don't always have.

"The purpose of training is to help a company be more productive in making money," explains ITrain's Murphy. "That means the trainer has to understand the business and organizational functions, and that's where very confident technicians often miss the boat. They're focused on the details of their equipment rather than the whole purpose of having that equipment."

Menno Aartsen learned the importance of business context years ago, when he trained early laptop users at three divisions within Verizon Communications Inc.

The IT training team emphasized how mobility could change users' work patterns. So rather than simply instructing users on how to use docking stations or USB memory devices, the training team demonstrated how mobility could help workers log on remotely at night or catch up on paperwork during their commutes, which were new practices at the time.

"We positioned mobility as a tool that could enable new kinds of work," Aartsen says.

5

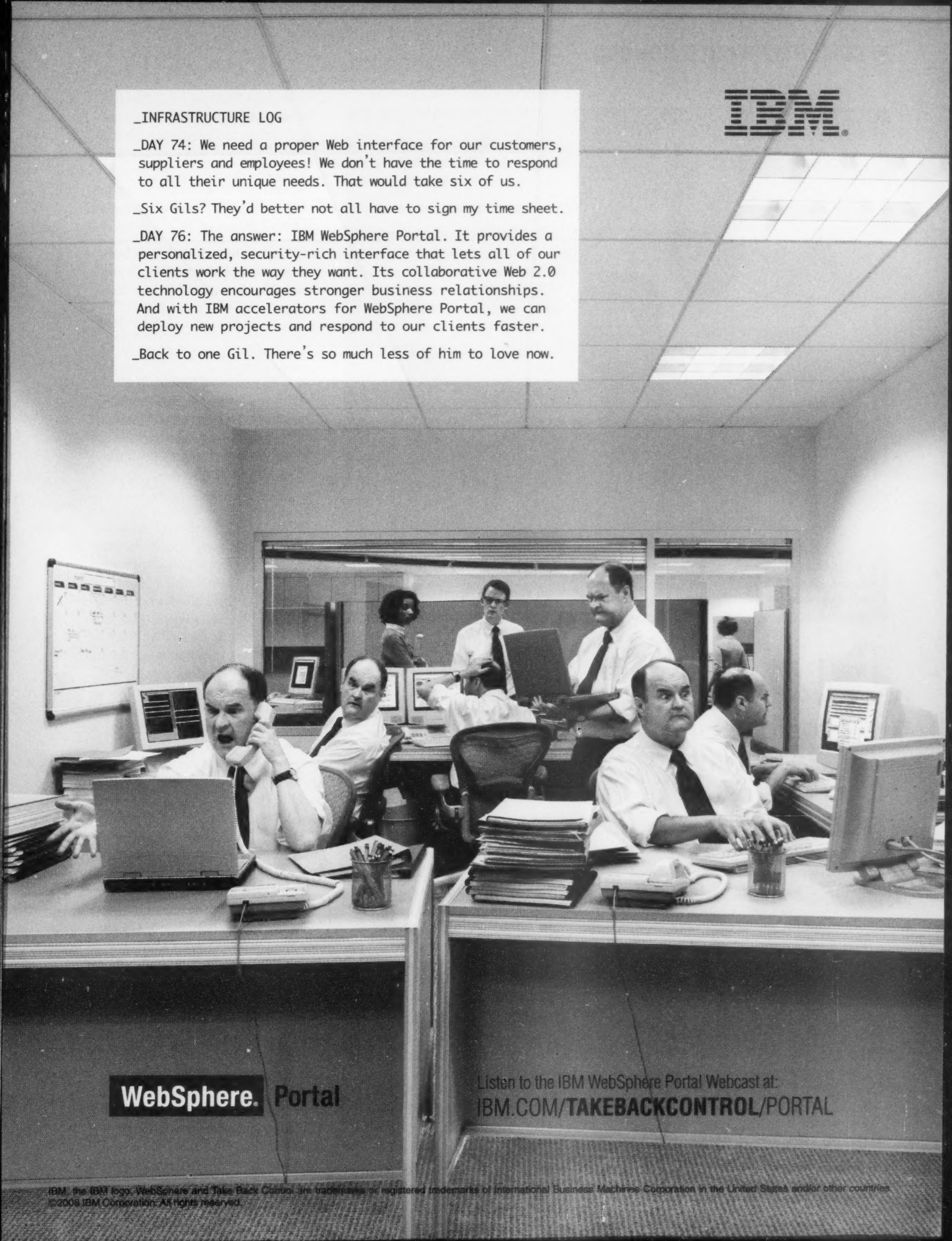
YOU NEGLECTED TO FORGE BUSINESS PARTNERSHIPS.

Since so much of what constitutes good training goes beyond the purview of IT, it's critical that IT reach out. Human resources departments and in-house training groups are obvious candidates for partnerships that can help IT bring the requisite business context and formal learning methodologies to its curriculum.

Reaching into the user community is another good option. IT might do a phased rollout to "superusers" first and leverage their feedback and expertise to tailor training for the remaining users. This supergroup is also the same community that tends to rely heavily on Web 2.0 technologies, such as blogging and wikis, all of which can play an important role in technology training, experts say.

Whatever the system being rolled out, the message for IT is clear: It's not just users who have a lot to learn; you've also got some work to do to make training a core IT discipline. ■

Stackpole *last wrote for* Computerworld *about future IT workers.*

_INFRASTRUCTURE LOG

_DAY 74: We need a proper Web interface for our customers, suppliers and employees! We don't have the time to respond to all their unique needs. That would take six of us.

_Six Gils? They'd better not all have to sign my time sheet.

_DAY 76: The answer: IBM WebSphere Portal. It provides a personalized, security-rich interface that lets all of our clients work the way they want. Its collaborative Web 2.0 technology encourages stronger business relationships. And with IBM accelerators for WebSphere Portal, we can deploy new projects and respond to our clients faster.

_Back to one Gil. There's so much less of him to love now.

IBM

WebSphere. Portal

Listen to the IBM WebSphere Portal Webcast at:
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Medical Missions for Children co-founders Frank and Peg Brady with Patrick, age 9 at the time of the photo, who has undergone numerous surgeries to remove a large tumor. Patrick lives in a small fishing village on the coast of Brazil.

Goodwill Mission

Teleconferencing paired with medical diagnostic equipment helps save children's lives worldwide. **By Mary K. Pratt**

FRANK BRADY expects to celebrate a significant milestone in June: His Medical Missions for Children charity will treat its 30,000th child that month.

That's an impressive record for the nine-year-old nonprofit organization, which connects leading U.S. doctors with doctors and their pediatric patients all over the world.

MMC uses telecommunications technology and other IT tools to bridge gaps in knowledge, treatment and geography. The organization has created what it calls the Global Telemedicine & Teaching Network to enable U.S.-based doctors to consult with foreign pediatric physicians through a distance-medicine network called the Telemedicine Outreach Program so they can help diagnose and treat children worldwide. Technology also has allowed MMC to expand its services to include educational content for health care providers and patients in multiple countries.

"MMC fulfills a host of health-related needs throughout the world," says Alberto Salamanca, the Mexico-based president of MMC's Latin America region. "Technology has proven to be the most important tool to carry the mission and vision of MMC."

Computerworld named Medical Missions for Children the winner in the nonprofit organization category in its annual Honors Program recognizing technology innovation.

In some ways, Brady, 65, has spent his whole life readying himself for this mission. After he contracted spinal meningitis as a 1-year-old, the doctors told his parents that their son had only three weeks to live. But a week later, they suggested trying penicillin — at the time, an experimental drug that hadn't been tested on pediatric patients.

The treatment worked, convincing Brady's mother that the boy was spared so he could do something special with his life.

Brady's path thereafter wasn't unusual. He spent most of his 35-year career working in international business. But he didn't forget his mother's words.

"After raising a family and retiring [in 1997], those words that my mother said over and over again forced me to look for something special," Brady says, explaining that he and his wife, Peg, wanted to help families facing medical crises similar to his own.

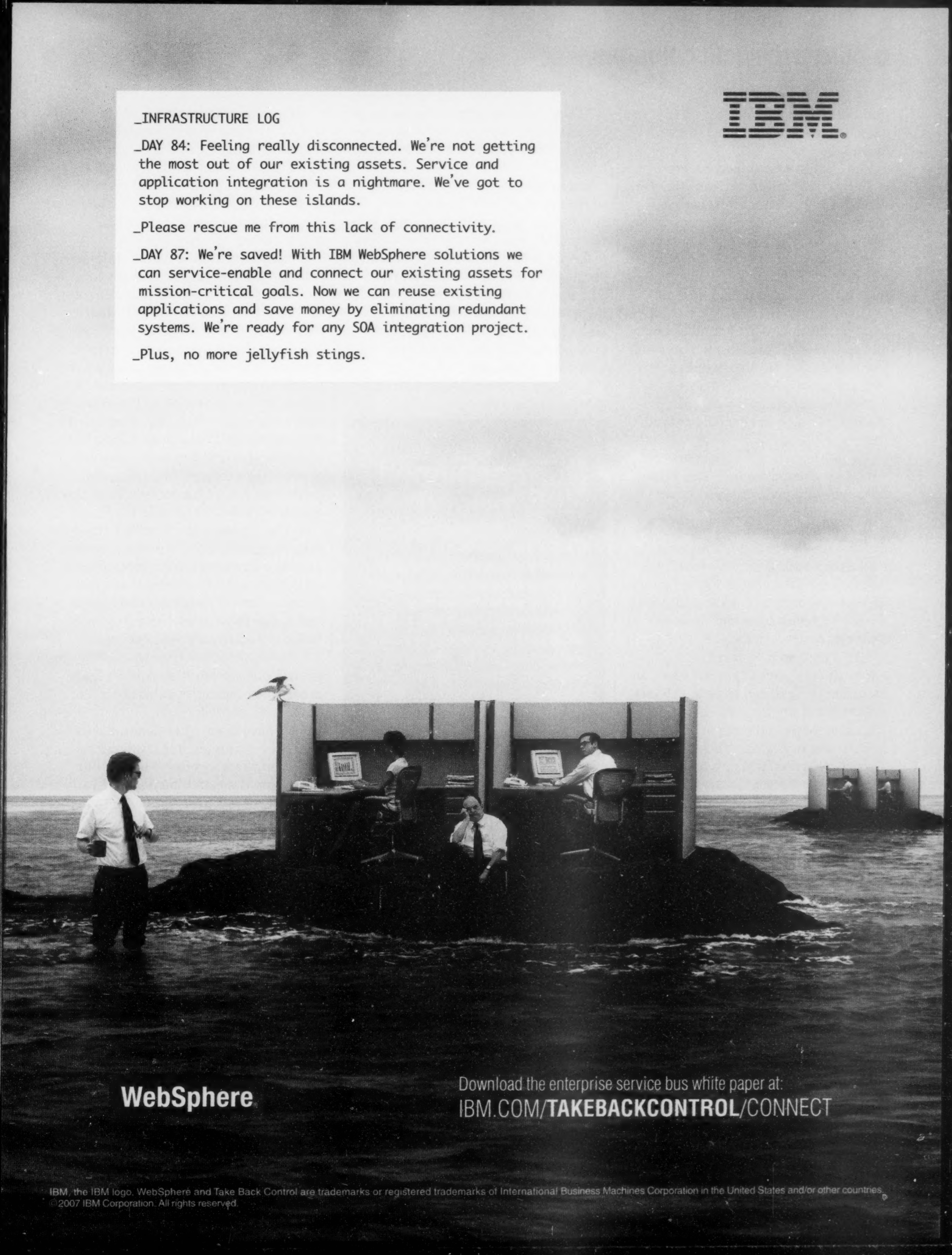
MMC does just that. It allows participating hospitals in developing countries to contact medical specialists from U.S. hospitals to help diagnose and treat severely ill children. The consultation is done through teleconferencing, obviating the time and expense of travel.

Brady says there's a dire need for such services. One out of every three children who comes to MMC has been misdiagnosed, and 85% of the properly

Continued on page 26

At a Glance

- **Medical Missions for Children is a nonprofit organization that uses technology to disseminate medical care and knowledge from the U.S. to medically underserved locales around the world. Its annual budget is $15 million, 90% of which goes to technology costs.**
- **Project champions include MMC co-founders Frank and Peg Brady, and President and COO John Riehl.**
- **The organization has 18 full-time workers, with 10 in technology-related positions.**
- **MMC has saved thousands of children's lives while also spreading medical knowledge around the world, thereby allowing local doctors to use their new skills to more effectively treat other patients.**



_INFRASTRUCTURE LOG

_DAY 84: Feeling really disconnected. We're not getting the most out of our existing assets. Service and application integration is a nightmare. We've got to stop working on these islands.

_Please rescue me from this lack of connectivity.

_DAY 87: We're saved! With IBM WebSphere solutions we can service-enable and connect our existing assets for mission-critical goals. Now we can reuse existing applications and save money by eliminating redundant systems. We're ready for any SOA integration project.

_Plus, no more jellyfish stings.

WebSphere

Download the enterprise service bus white paper at:
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Continued from page 24

diagnosed patients need their treatments adjusted.

MMC's first case linked doctors at St. Joseph's Children's Hospital in Paterson, N.J., where MMC is based, to physicians in Panama treating an 8-year-old boy with a cranial deformity.

Brady used about $100,000 from his retirement savings to buy Polycom Inc. teleconferencing equipment, which included integrated diagnostic equipment in addition to a monitor, a camera and speakers, for the Hospital del Niño in Panama City. He also bought a Polycom setup for doctors at St. Joseph's.

"We showed it could work, and we started putting it in hospitals around the world," Brady says.

The MMC network now connects volunteer doctors from 27 Tier 1 U.S. hospitals with pediatric health care facilities in 108 countries.

In addition, MMC now operates a global satellite and IPTV network called the Medical Broadcasting Channel, as well as the Global Video Library of Medicine and the Giggles Children's Theater, which brings entertainment to pediatric patients in the U.S.

"It's a great humanitarian use of telemedicine," says Craig Stephens, an associate professor of biology at Santa Clara University in California and chairman of the judging panel for the health category of The Tech Museum Awards program, which is administered by The Tech Museum of Innovation in San Jose. MMC was a 2006 Tech Museum Awards laureate.

As it grows, MMC's IT needs remain very similar to what they were in its early days, says John Riehl, MMC's president and chief operating officer.

However, compared with earlier tools, today's teleconferencing equipment supports much richer interactions among doctors and offers more-advanced diagnostic capabilities. For example, cameras can provide magnified views of the skin, and scopes can look into patients' eyes and noses.

MMC has also started employing high-definition videoconferencing equipment, which can be used to view digital images, Riehl says. This gives doctors real-time access to MRIs, CT scans and X-rays, without loss of image quality.

"They can look at the same image at both locations with quality that allows them to draw diagnostic conclusions," Riehl says.

Improvements in equipment haven't addressed all of MMC's challenges, however. Brady says there are times when MMC must send its own staffers to foreign hospitals to set up equipment because of a lack of on-site expertise. The World Bank, which provides equipment for hospitals around the world, also helps install MMC's equipment. Polycom has also provided support to hospitals, Brady says.

Cost and access to bandwidth can also be challenges.

For example, in late 2005, MMC started working with Armenia's National Institute of Child and Adolescent Health. When MMC was negotiating for high-speed Internet service with Armenia's sole service provider, the ISP initially asked for $7,500 a month before agreeing to $500.

Despite the cost, the return is significant. Dr. Konstantin Ter-Voskanyan, a pediatric cardiologist and president of the Armenian Association of Pediatric Professionals, says MMC collaborated with local doctors on seven cases in 2007, and the collaboration saved several lives by allowing doctors to make the proper diagnosis and set up the right treatment. And even in the cases where the patients died, "the consultation had a positive impact," Ter-Voskanyan says, because the exchange of information helped the Armenian doctors learn how to deal with similar cases in the future.

At the request of the Armenian medical community, MMC also implemented an online environment for continuing education, and it now records and publishes lectures through a portal it hosts and makes those available to Armenia's pediatric health care professionals.

Riehl says that the system's underlying technology is from Accordent Technologies Inc., which donated about half of the tools needed.

"We have always first identified the technology providers that offered the goods and services that best met our needs and then attempted to build a philanthropic partnership with them," Riehl explains.

In addition to using Accordent equipment for its education portal, MMC uses products from Intelsat Ltd. for its satellite broadcast technology and tools from LHS Productions Inc. for its video library and broadcast scheduling setup.

MMC also has had a partnership with Polycom since 2001, when the Pleasanton, Calif.-based vendor named MMC a winner in a contest for innovative use of its videoconferencing equipment. Since then, Polycom has donated money and equipment to MMC.

Says Polycom Chairman and CEO Robert Hagerty, "It's the ultimate example of telemedicine at its finest." ■

Pratt *is a* Computerworld *contributing writer in Waltham, Mass. Contact her at marykpratt@verizon.net.*

Old-Fashioned Networking

Frank Brady started his tech-driven Medical Missions for Children organization with an old-fashioned tool: person-to-person networking.

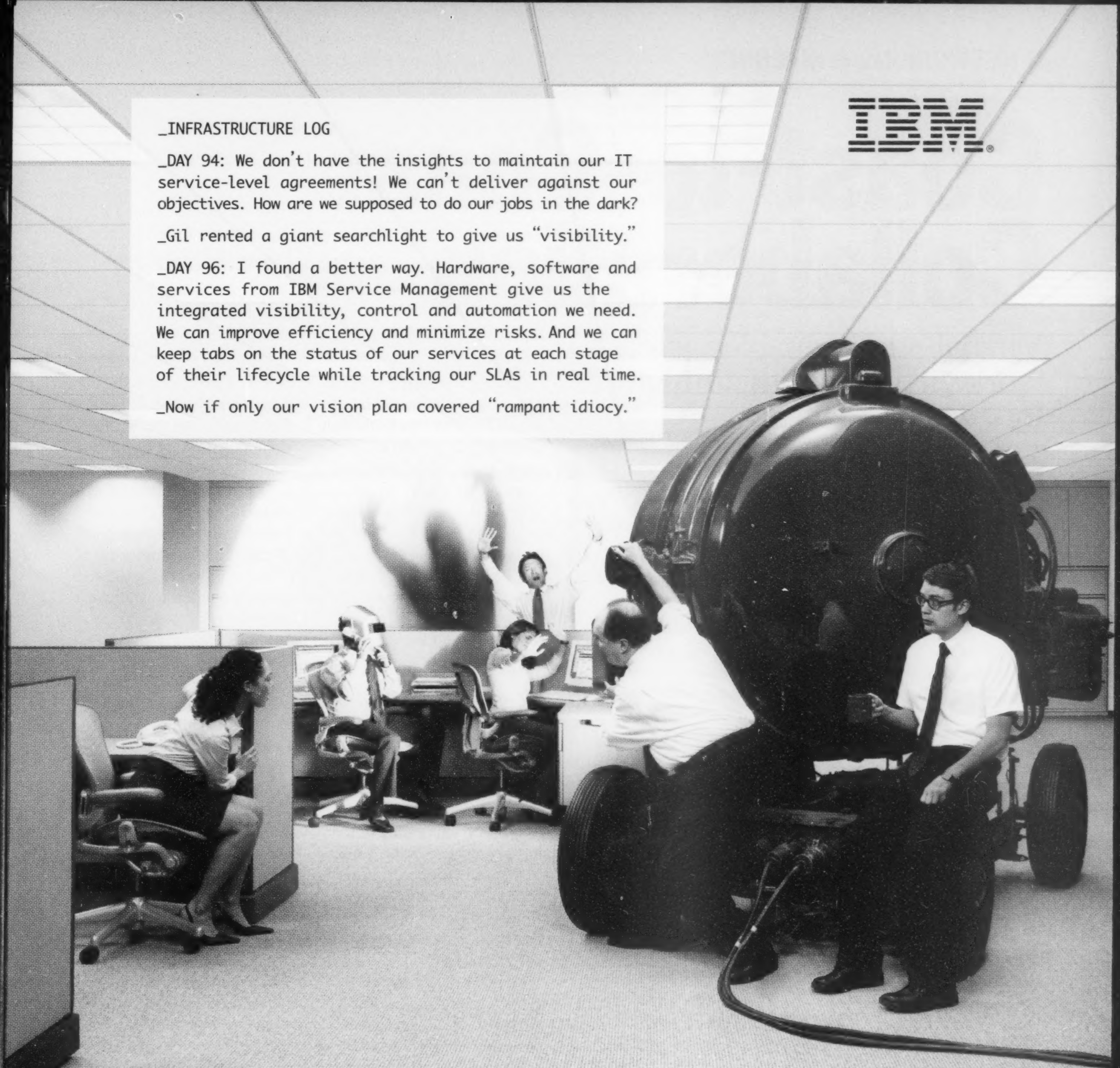
"When I want to meet with a chairman, I just keep on talking to people until I get the right introduction," Brady says. "Even our trustees aren't trustees because they give us a lot of money – it's because I value their Rolodex. I'm able to get to a whole lot of people that way."

Indeed, Brady's ability to build his organization relied as much on personal contacts as it did on IT connections. For example, a friend introduced him to Alberto Salamanca, who at the time was head of the Bolivian mission to the United Nations. Salamanca introduced Brady to Ambassador Mary Morgan-Moss, deputy permanent representative of the Republic of Panama to the U.N.

Brady says both people were instrumental in introducing him to contacts in Latin America.

"You get a lot more things done if you start from the top and work your way down," Brady says, noting that he uses ambassadors to the U.N. to gain access to – and persuade – the first ladies of various countries to be champions of MMC's work.

– MARY K. PRATT



IBM

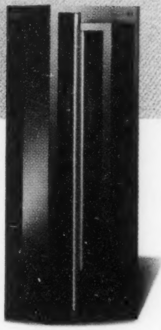
_INFRASTRUCTURE LOG

_DAY 94: We don't have the insights to maintain our IT service-level agreements! We can't deliver against our objectives. How are we supposed to do our jobs in the dark?

_Gil rented a giant searchlight to give us "visibility."

_DAY 96: I found a better way. Hardware, software and services from IBM Service Management give us the integrated visibility, control and automation we need. We can improve efficiency and minimize risks. And we can keep tabs on the status of our services at each stage of their lifecycle while tracking our SLAs in real time.

_Now if only our vision plan covered "rampant idiocy."



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Coast-to-Coast Collaboration

Virtual Studio enables actors to work virtually with animators.

By Jennifer McAdams

PREMIER 100 IT LEADERS 2008 **BEST IN CLASS** This story is part of a series showcasing the best projects of this year's Premier 100 IT Leaders.

DreamWorks Animation SKG

The Glendale, Calif.-based animation production company produces family entertainment products using computer-generated graphics. Its 2006 revenue totaled $394.8 million.

IT CHAMPION: Derek Chan, head of digital operations

IT STAFF: 94 employees in the digital operations unit

PROJECT PAYBACK: The studio now releases two movies annually; production-schedule efficiencies are tied to the fact that artists can work on several projects simultaneously.

COUNT ACTOR and comedian Jerry Seinfeld among those who have benefited from DreamWorks Animation's recent efforts to inject more collaboration into its film-making process.

With Hewlett-Packard Co.'s Halo Collaboration Studio as its centerpiece, DreamWorks built its Virtual Studio infrastructure over the past year not only to include more participation from entertainers, such as Seinfeld, but also to serve as a way for artists, animators, directors, producers and others scattered among geographically dispersed locations to participate in projects more fully.

For Seinfeld, that meant far less buzzing back and forth between his beloved New York and DreamWorks' production facility in Glendale, Calif., for his work on the animated feature *Bee Movie*. DreamWorks also houses operations in a second production facility, in Redwood City, Calif.

"With Virtual Studio, we have reached out to and worked with talent in ways that were not feasible in the past," says Derek Chan, DreamWorks' head of digital operations. "Jerry Seinfeld's participation on *Bee Movie* is an excellent example. There were several occasions where he worked from his offices in New York."

While high-end telepresence systems appeal to corporations of all sizes, the technology largely remains a luxury of major companies such as DreamWorks, which worked with HP on both the concept and development of the Halo line, says Jayanth Angl, an analyst at Info-Tech Research Group in Toronto.

"High capital and operating costs for equipment, network bandwidth and management make telepresence still limited to larger enterprises," Angl says. "Deployment typically constitutes a multimillion-dollar investment. However, smaller organizations are also looking at collaboration solutions that offer more flexibility, since they cannot always justify building dedicated videoconference rooms."

Although increased flexibility for those working on its animated films helped DreamWorks justify the purchase of such a setup, that wasn't the only goal the company sought to accomplish with this intensive IT project. It also used Virtual Studio to help divide the intensive processing requirements of animated films between its production houses.

"The Virtual Studio computer infrastructure we've created is designed to allow artists at either of our two sites to work on projects. This gives DreamWorks Animation the flexibility to staff projects on an as-needed basis," Chan says.

Enhanced collaboration and better balancing between production sites have been key to fulfilling the ultimate dream behind Virtual Studio: to be able to crank out more movies.

"The project's main focus was adding capability and functionality — as opposed to replacing equipment — in order to create the resources needed to achieve the release of two feature animated films per year," Chan says.

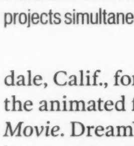
While Virtual Studio wasn't conceived as a hardware replacement project, DreamWorks did use the opportunity to add sophisticated technology to help users collaborate.

Along with deploying HP's Halo suites, DreamWorks revamped its WAN infrastructure and more than tripled bandwidth in order to transport video, computer-aided design files and other high-end images between sites.

In sharing this work between sites, DreamWorks also had to hone storage technology to mitigate latency and allow virtual compute clusters to work cohesively.

"The largest challenge has been making these changes while active production continued," notes Chan. "It's akin to changing the wheels on a car while the car is moving." ■

McAdams *is a freelance writer in Vienna, Va. Contact her at JMTechWriter@aol.com.*



"With Virtual Studio, we have reached out to and worked with talent in ways that were not feasible in the past.

DEREK CHAN, HEAD OF DIGITAL OPERATIONS, DREAMWORKS SKG

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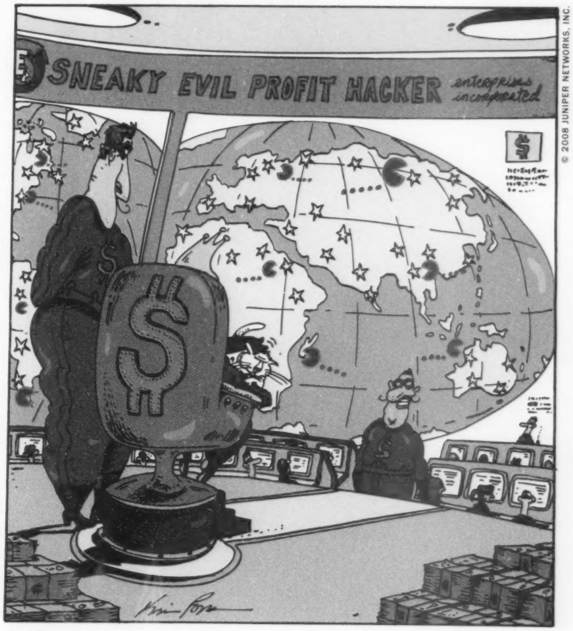

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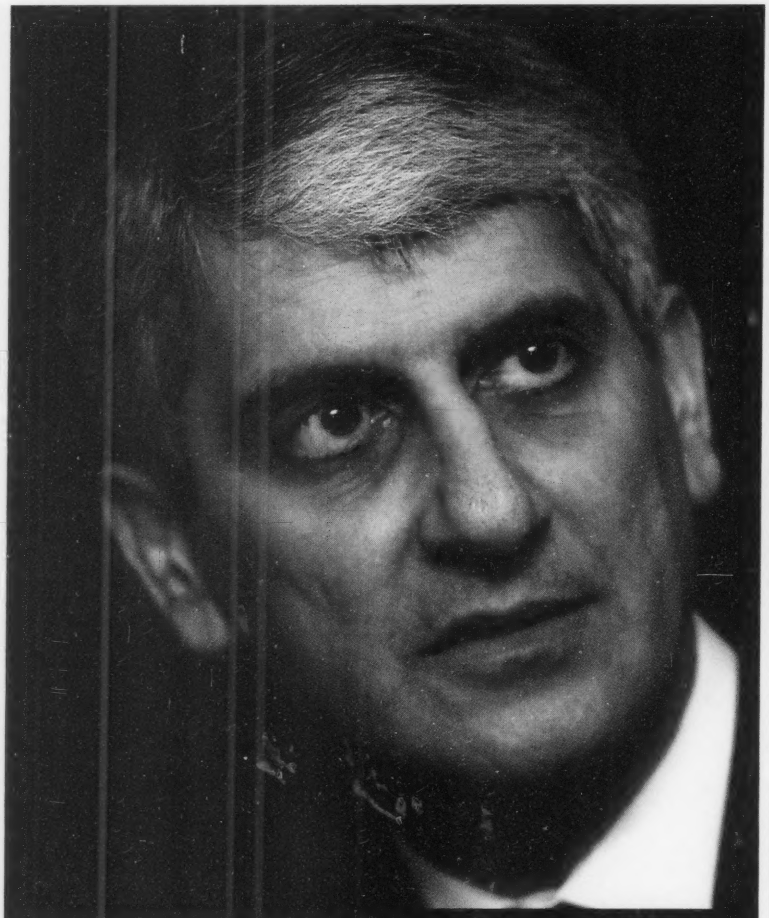


Staffers and even external customers have become "complete believers" in BT's agile initiative, says CIO Al-Noor Ramji. "It gives them far better control" in development efforts.

A Telco Giant Gets Agile

How BT Group overcame barriers to agile programming.

By Thomas Hoffman

IN 2005, BT GROUP PLC began replacing an aging, Unix-based phone-traffic monitoring system with a Web-centric architecture. The intent: to allow traffic managers to make quicker changes to switches and other physical devices to handle shifts in network loads — on any point in the company's vast telecommunications network — without risking system overloads.

Developing Skills

Here's how BT tweaked its developers' agile skills:

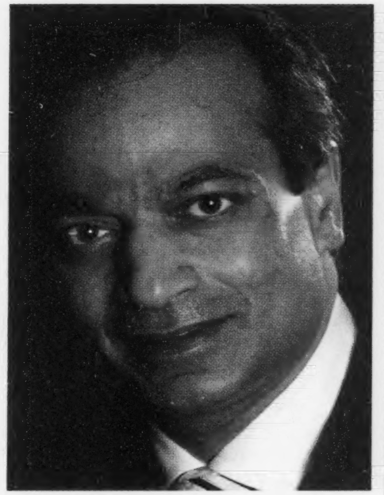
- **A series of classes in "people" skills and agile methods for programmers.**
- **Hands-on training sessions for programmers to augment classroom learning.**
- **Recruitment of IT professionals with agile experience in a variety of industries.**
- **Having those experienced recruits coach developers who are new to agile programming.**

At the time the rollout began, few people in the company even knew how the old system worked, and the project team knew it would be a bear to upgrade, says Kerry Buckley, a lead software developer in Ipswich, England, who worked on the initiative.

The new system has made the load-balancing work of the phone-traffic controllers much easier. But the most interesting part of the development effort was this: The project was completed within the construct of BT's then-nascent 90-day agile-development cycle.

The central ideas behind agile programming are to code quickly, test out what you've done with users, fix any problems and then move on.

Prior to the London-based telecommunications giant's shift to an agile development methodology in 2005, IT development was slow and steady, according to Al-Noor Ramji, CIO at BT Group and CEO of BT Design, its IT division. It could take three to nine months for a third-party developer to gather specifications for a new project. Then the development itself could take as much as 18 months to complete. A traditional software testing cycle, typically performed after coding was completed, could prolong the project



> **Historically, we used to do 16 or 17 different types of tests. Now, we've determined that only one test matters: from customer concept to completion.**
>
> **J.P. RANGASWAMI,**
> MANAGING DIRECTOR OF
> SERVICE DESIGN, BT DESIGN

The Roots of Agile Development

Perhaps the most succinct discussion of agile development comes from the nonprofit Agile Alliance, whose members wrote the following Manifesto for Agile Software Development in 2001:

We are uncovering better ways of developing software by doing it and helping others do it. Through this work, we have come to value:

- **Individuals and interactions over processes and tools**
- **Working software over comprehensive documentation**
- **Customer collaboration over contract negotiation**
- **Responding to change over following a plan**

That is, while there is value in the items on the right, we value the items on the left more.

by several months, says Ramji.

Although telecommunications companies haven't historically been associated with progressive approaches such as agile development, BT's IT organization needed to speed up its system development cycles to help it deliver new mobile telecommunications and other types of services.

BT's shift to agile development also meant that its 3,000-person global development organization would be working more closely with users to better understand and meet their needs. This was especially true during the requirements-gathering stage, says J.P. Rangaswami, managing director of service design at BT Design in London.

CHANGING MINDS

BT's shift from traditional waterfall development techniques to an agile approach has led to significant productivity and business benefits, but it didn't happen overnight, nor was it easy for a company as massive and widespread as BT, say Ramji and Rangaswami.

The first step was to tweak the IT staff's skills (see box on previous page). Then the company's IT leaders had to break through some misconceptions among internal and external business customers, who thought that "agile" meant they could inject new requirements during the development cycle to suit their whims, says Ramji.

Moreover, although the company's shift to agile development was "more readily accepted" by senior executives and junior staffers, middle managers were skeptical about how it might affect them, Ramji says.

The naysayers included IT infrastructure managers who had gotten used to having more formal documentation for new software or enhancements to existing systems, says Rangaswami.

To help work through those doubts, business customers were invited to BT's development "hothouses" to see for themselves how the 90-day development cycles worked.

The company also had to change its own ideas about how projects should be managed and executed, according to Rangaswami. For example, a quick, iterative, agile development approach lends itself to software projects involving geographically dispersed development teams — located, say, in both London and India. This enables them to "follow the sun" and work around the clock.

Ramji, Rangaswami and other BT IT leaders had to convince IT managers and staffers that agile didn't necessarily mean they were de-emphasizing software quality assurance and testing.

"Historically, we used to do 16 or 17 different types of tests" before a system was put into production, says Rangaswami. "Now, we've determined that only one test matters: from customer concept to completion."

So BT has begun tracking new metrics such as improvements in development cycle times and "right first time" features, says Rangaswami, adding that the group does not yet have metrics to share.

All in all, BT's development organization invested less than $5 million to launch the agile initiative, including classroom and workshop training for its developers. Thanks to frequent interactions with BT's software developers, other BT employees and even some external customers have become "complete believers" in the initiative. "It gives them far better control" in project-development efforts, says Ramji.

And the shift to agile has been a boon to developers like Buckley. Under the old waterfall approach, customer requirements would be incorporated into software and then tested with users — often only to discover that "this isn't really what they wanted," he says. "The main advantage I see [with agile] is that you spend more time working on the right [system] features by talking to customers all the time." ■

SECURITY MANAGER'S JOURNAL | C.J. KELLY

When Taking Time Off Is No Vacation

Family obligations run up against a demanding **work schedule.** Does anyone have advice on **working remotely?**

Trouble Ticket

AT ISSUE: A family crisis pulls our manager across the country.

ACTION PLAN: Do all she can before she goes, and keep connected while away.

IF YOU'VE been reading this column over the past couple of months, you know that my general theme is that I lack the time, money and resources to get everything done that I need to do. The last thing you would expect to hear from me is that I'm taking time off.

In three and a half years of working for this state agency, I haven't had a real vacation. But much as I'd love to spend time on a warm beach somewhere, I couldn't really enjoy that right now. I would be too burdened with guilt about how much work I'd be leaving my staff buried in.

No, my time-off request was prompted by something far more pressing than the need for a break. My dad, an honest-to-goodness rocket scientist, was diagnosed a year ago with "cognitive impairment," a nice way of saying "Alzheimer's." Now my mom plans to move them across the country to be closer to me. It's a big undertaking, and she already has her hands full taking care of Dad. She needs my help.

Of course, I still have to maintain the security infrastructure. Before I went on leave, I worked a lot of hours trying to get ahead on my project schedule. It's amazing what you can do when you lock yourself up in a lab, ignore e-mail and mute the cell phone.

In fact, by the time I left, I had managed to get two months ahead of schedule. With no time for chit-chat, I condensed my responses to questions and requests, even from my boss. I checked voice mail and e-mail when I woke up each morning, in the middle of the day and when I got home. If a message wasn't urgent, I ignored it or passed it along to someone on my staff.

I will also be working remotely from my parents' home. I've never had a problem burning the midnight oil, and Mom and Dad do a lot of sleeping. But I would love advice on the best way to connect to our security labs.

■ By the time I left, I had managed to get two months ahead of schedule.

We have two labs, at opposite ends of the state. They're on a subnet that's separate from the production network. I work primarily in one lab and remotely log into the other, relying on a tech when something has to be rack-mounted, physically rebooted or moved. This has been working out just fine.

REMOTE CHANCES

I want to be sure that I connect to the labs in the most secure manner when I'm across the country. I use a laptop with broadband wireless and access the state network with a Cisco VPN client. I use terminal services to log into my computer in either security lab via the IP address. That computer will not allow anyone else to log in, with the exception of a domain administrator.

In each lab, the security gear that I'm working on is connected to a switch that is not connected to the production network. Each computer system from which I manage these devices has a console connection to a primary security device. That device is connected to the lab switch. From the console connection to the primary device, I can access the other devices on the private LAN.

I've racked my brain, but without more sophisticated technology, this is the only solution I can come up with. I know there are a lot of Cisco guys out there who do most of their work remotely, so this may all sound childish. But it's the best I can do as a security manager doubling as a security engineer.

The other task at hand while I'm away is to hire a security engineer. We're using a Web-based application in the hiring process, so I can easily manage applicants from afar using e-mail and the phone. We were recently informed that there is a very small hiring window for specific open positions — a slight reprieve from our hiring freeze — so I can't let this opportunity slip away. Work and family obligations are mounting, and I'll never be able to keep up with both of them if we don't get another staffer on board. ■

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JOIN IN

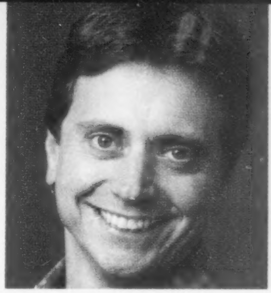
To join the discussion about security, go to **computerworld.com/blogs/security**.

This week's journal is written by a real security manager, **"C.J. Kelly,"** *whose name and employer have been disguised for obvious reasons. Contact her at mscjkelly@yahoo.com.*

■ OPINION

Robert L. Mitchell

The Killer in the ER



"THE GOOD news is that you look better than your X-ray," the doctor says in a joking manner. What's the bad news, I ask? "The X-ray shows that you are in the end stages of congestive heart failure." I sit bolt upright on the gurney. My mind races.

I am 47 years old. I have a wife and a 15-year-old daughter. I am on vacation. I am 1,500 miles from home. I have come into the emergency room of a hospital in Punta Gorda, Fla., because I thought I had bronchitis. I am dying.

It is 7 a.m.

The preliminary diagnosis was made by a doctor who, even in an emergency, had no access to any of my health records — allergies, medications, known medical problems, or radiology and lab results — in shaping his diagnosis. All of that information exists in digital form, locked away in my primary care provider's systems in Keene, N.H.

There's a flurry of data-gathering activity. A nurse begins building a chart for me on the fly, filling in the blanks. Do you smoke? Do you have a family history of heart disease? Another begins covering my body with electrodes and hooks me up to an electrocardiogram. An intravenous drip goes into one arm. Copious amounts of blood are pulled from the other for lab work. In the ensuing chaos, the needle in my arm blows out. Blood spurts across my shirt. I feel a wet washcloth on my forehead, and as they wheel me back to X-ray, I begin to faint.

At 10 a.m., the doctor returns with "good" news. I don't have congestive heart failure after all. I happily accept my new diagnosis of bronchitis, take my prescription and return to my family, happy to be alive.

The medical data that might have saved me several hours of terror sat unused. It was unavailable to doctors outside of Dartmouth-Hitchcock's Keene clinic, except by mail or fax. And even if the clinic could transmit my records, Charlotte Regional Medical Center's systems were incapable of receiving them. According to its records department, the hospital still uses paper-based processes for its medical records.

■ The preliminary diagnosis was made by a doctor who, even in an emergency, had no access to any of my health records.

Standards that could have helped solve these problems have been available since 1991. But 17 years later, the industry still doesn't follow them. Health care providers and systems vendors haven't agreed on any unique patient identification codes, universal schemas or global XML data models. Moreover, they have no real incentives to pursue them. Providers see no direct economic benefit from adopting interoperable electronic health records. For vendors, open standards threaten services revenue and lower barriers to competition.

Issues arising from badly designed and poorly integrated health care IT systems harm or kill more patients every year than do medications and medical devices, says Asif Ahmad, CIO at Duke University Health System. Yet there's absolutely no control or regulation over them.

Until something changes, the onus is on the patient to take responsibility. Under HIPAA, I have a right to a copy of my health records. But the data needs to live online, where it's accessible, not in my suitcase or in a sheaf of papers.

A few providers offer access to a limited set of health records via the Web. Another approach is to entrust it to an organization such as Dossia, an employer-funded nonprofit that is piloting a secure, Web-accessible, privacy-protected and entirely user-controlled repository for personal health care data. That data, says Dossia President Colin Evans, is currently "scattered across Hell's half acre," in primary care, specialist, pharmacy, payer and other repositories.

Evans envisions a "break glass, pull handle" feature that would let me preauthorize qualified emergency-room physicians to access all or part of my Dossia health record in an emergency. If I arrived in the ER with a bracelet or card with a Dossia ID number, the hospital could use that number in conjunction with its unique authentication code to gain access.

It's not a perfect plan. But it's a hell of a lot better than what the remote ER has to work with today, which, more often than not, is nothing at all. ■

Robert L. Mitchell *is a* Computerworld *national correspondent. Contact him at Robert_Mitchell@computerworld.com.*

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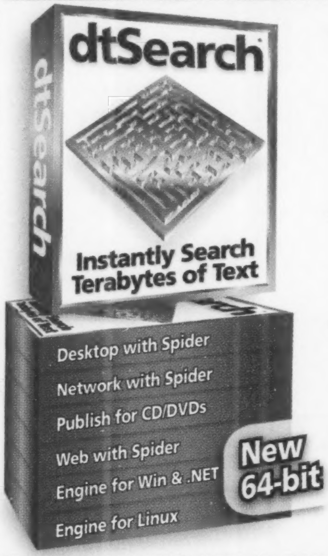
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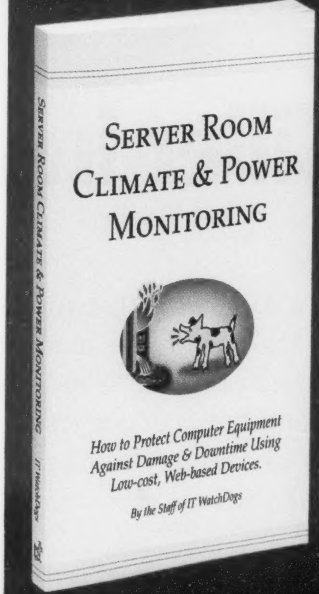
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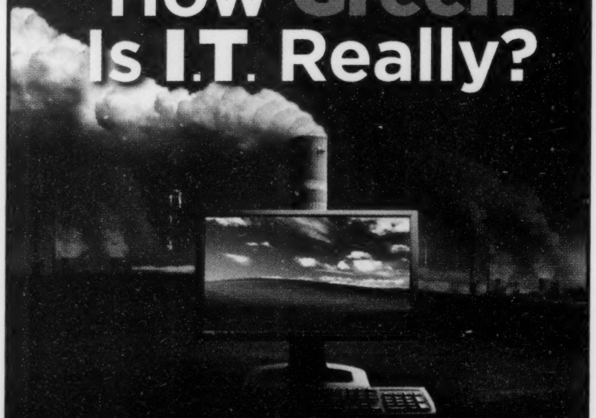

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PAGE COMPILED BY JAMIE ECKLE.

Q&A

Donna Walters Kozberg

The president of **Lift Inc.** talks about how the organization helps professionals who are disabled gain IT careers.

Has the demand for Lift-trained IT professionals changed over the years? We've been training, hiring and placing IT professionals who have physical disabilities since 1975. In the mid-'70s, there was huge demand for entry-level programmer-analysts. We recruited candidates who had exceptional analytical ability and typically little or no background and trained them to program in assembler, Cobol, Fortran, etc. Today we're placing consultants and employees who have disabilities in specialties ranging from Web development to technical writing to computer security to tech support. Most have prior technical or business experience and/or degrees in relevant fields from leading universities.

Do the companies you work with suggest particular areas of training or methods of instruction? Every employee's program with Lift is individualized. We recruit applicants only for specific positions identified by our corporate clients. Curricula and methods of instruction vary with skill-set requirements, accommodation needs and candidates' backgrounds.

Who conducts the Lift training? Where is it done? Training typically consists of a combination of online mentored instruction in both technical and business skills, and on-the-job programs at client sites. Pre-employment training usually takes place at home, with multi-resource curricula developed by Lift and approved by the client, and it is always rigorous.

Are clients optimistic about their employment prospects? Everyone accepted into the Lift program is assigned to a yearlong contract with a corporate client, with the end goal of direct employment with that client. Because of the outstanding track record of participants, those who are accepted into the program are extremely optimistic.

– JAMIE ECKLE

I Quit!

[That is, I will be leaving my current position in six to eight weeks, depending on the governing statutes.]

Human resources consultancy Mercer LLC studied 43 nations and found that the U.S. and Mexico are alone in having no statutory notice period for leaving an employer. Most countries require advance notice of a month or so, though they also tend to require companies to give an equal amount of notice before laying employees off. The countries with the longest required notice periods are Switzerland, Slovakia and the Czech Republic, where two months' notice is required. Mercer dug these factoids up for its 2007 Global HR Factbook.

Now, Why Would She Want a Career in IT?

A detailed UC Davis study of women at the top in the 400 largest publicly held corporations in California shows that they are few and far between. The study, "A Census of Women Directors and Executive Officers," which covers the period from July 2006 to June 2007, paints a particularly dismal picture of life in the technology industry.

SOME KEY FINDINGS:

- Women hold only **10.4%** of the board seats and highest-paid executive officer positions (including but not limited to CEO, COO, CFO and CIO).
- **199 of the 400 companies** have no women among their executive officers.
- **188** have no women in the boardroom.
- **122** have no women in any top executive positions or on the board of directors.
- **387 of the 400 companies** have male CEOs.
- The telecommunications sector has the lowest percentage of women directors, with **3.2%**.
- The electronics sector has the lowest percentage of women executive officers, with **2.9%**.

SOURCE: UNIVERSITY OF CALIFORNIA, DAVIS

And the 2006 Catalyst Census isn't much more optimistic:

50%
Percentage of women in management, professional and related occupations.

15.6%
Percentage of female officers at Fortune 500 corporations.

14.6%
Percentage of female board directors at Fortune 500 corporations.

SOURCE: CATALYST CENSUS, 2006

AT HARVARD, IT'S NOT JUST THE IVY THAT'S GREEN

Median base salary by industry destinations for Harvard MBAs, class of 2007

Consulting	$120,000
Finance	$115,000
Real estate	$112,500
Technology	$110,000
Other services	$110,000
Entertainment/media	$105,000
Biomed/pharmaceutical	$105,000
Manufacturing	$105,000
Consumer products	$90,000
Nonprofit/government	$90,000

SOURCE: HARVARD BUSINESS SCHOOL

Diversity Report: Leaders Focus on Attracting Students, Cultivating Diverse Work Environment

Two decades ago, the term Corporate Diversity equated to awareness training, workshops, and attracting more people of varied backgrounds and ethnicities to the workforce. As the information technology industry nears the end of the first decade of the 21st century, it faces a multitude of diversity issues – but they reach well beyond balancing the number of diverse employees.

Top among the issues today is attracting the best and brightest workers – without regard to background, ethnicity, age or gender. There's a proclaimed shortage of technology workers in the United States, despite outsourcing and offshoring. At issue is the ability to encourage young people to study science, technology, engineering and mathematics subjects (STEM). Programs abound, from the process model put forth by Battelle Institute for K-12 education to the individual efforts of IT companies from coast to coast.

Tyrone Taborn, founder and chief executive officer of Career Communications Group, which publishes Black Engineer and a host of other ethnicity-based magazines, last conducted his diversity survey and report for technology workers in 2006. This fact alone is a hallmark of the current era – associations are reporting less about diversity and instead focusing on creating a workplace environment that respects and embraces diversity – in terms of ethnicity and gender, but also increasingly on the basis of a workforce that spans four generations. That's the widest age gap ever, and it brings about a variety of new work requirements.

Taborn's mantra now focuses on workplace issues – conflict, lack of professional recognition among women and people of color, minority leadership development and retention. His mention of workplace conflict is not just an impression. Studies this year indicate an increase in crude language and behavior in the workplace, as well as reports of senior leaders losing their jobs for not responding quickly enough to conflicts arising from diversity in the workplace. Better than 85% of the employees in the study reported employers have a confidential process for employees to report gender or racial discrimination occurrences.

Taborn's work also found that recognition for innovation and hard work is viewed as being higher among technology workers than among non-technical employees. Respondents in his study said employers have programs in place to create a sense of belonging – networks, affinity groups and mentoring.

Professional development remains a key differentiator for companies that successfully value diversity. According to the Information Technology Senior Management Forum, fewer than 3% of senior IT professionals are African-American. Computerworld's 2007 salary survey reflects the same data point with 3% of respondents listing themselves as African-American. Informal and formal mentoring programs are necessary to push this number upward.

So what are the challenges for the future of valuing diversity? The list is short:

- Assuring youth, regardless of socio-economic background, understand opportunities in the technical fields and can pursue studies in those fields.
- "Nurturing productivity, innovation and harmony in that workforce" by helping employees understand how to resolve conflict and how to deal effectively with situations as they arise.
- Employers must continue to move beyond static data points on awareness training or workforce demographics; the hard work is in seeking and identifying creative ways to continuously build a "value proposition" for valuing and respecting individuals.

For more information about IT Careers advertising, please call: 800.762.2977

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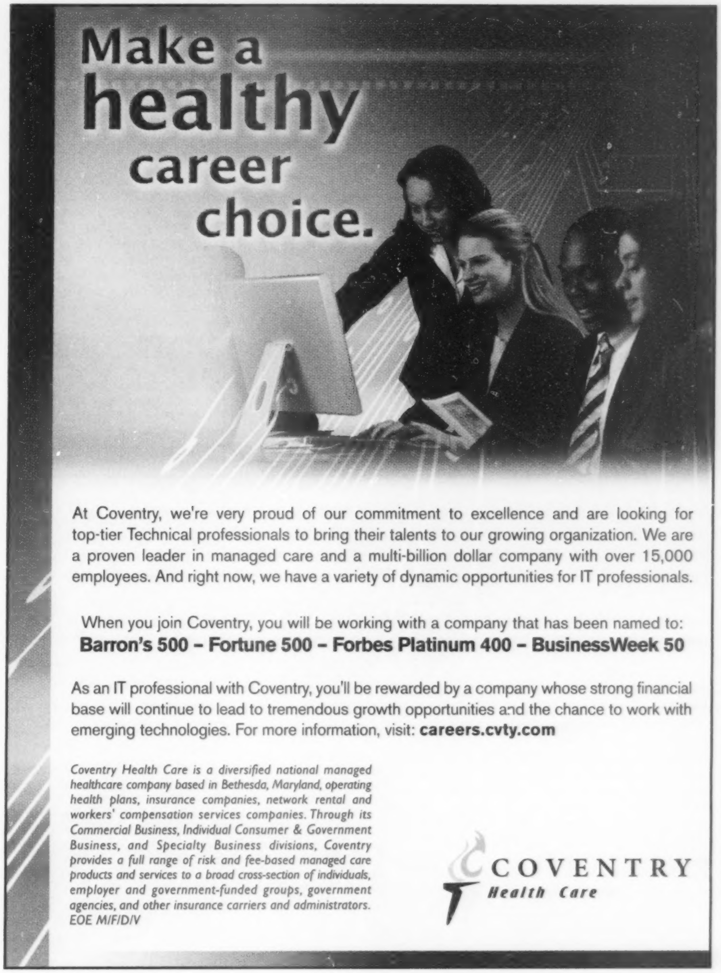
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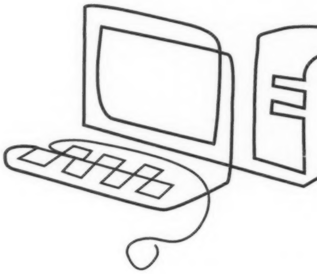

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TRUE TALES OF IT LIFE AS TOLD TO SHARKY

Who Says Nobody Listens to IT?

Pilot fish is assigned to install an application on a secretary's machine, so he calls to see if the user is at her desk. "She didn't answer the phone, and it rolled to the next secretary, who sits right across from her," fish says. "I asked if the person was anywhere close to her desk and was told that she had stepped out for a minute. I asked if the secretary's screen was locked, and she told me no. I asked her to please move the mouse so that the screen saver would not kick in and lock the screen before I got there. I got off the phone with her and then took another call. About five minutes later, I was able to go to the user's machine. The secretary I had talked to on the phone was sitting there – still moving the mouse around so the screen wouldn't lock."

Half Right

User comes to pilot fish with 100 pages of hard copy that need to be e-mailed to a client. Fish explains how to use the copier/scanner to automatically create PDF files, but he points out that the resulting file may be too huge to e-mail successfully and suggests splitting the material into two files attached to two e-mail messages. "I tell him to let me review it before he sends it," says fish. "Resulting file is 9MB, too big for most e-mail systems. I split it into two files and tell the user where the files are so he can send his e-mails. About an hour later, user stops by to tell me that the files didn't go through. The recipient's e-mail server rejected it because it was too big. Yes, he attached both of them to the same e-mail."

Oops!

While visiting his tax consultant, this pilot fish needs some information, and he has to get onto the Internet to find it. No problem – he fires up his laptop and connects to the first unsecured wireless network he finds. "Then I realized that the connection I was using was also the strongest one in the list, and thus most likely that of my tax consultant," says fish. "Upon further investigation, I found that not only was the router not secured, but the administrative username and password were still set to the defaults. After logging in and viewing the DHCP table, I was able to connect to her computer and see all her files on both her and her husband's business PCs. We also noted that there were two additional people she didn't recognize who had been using her Wi-Fi connection. She was baffled until she remembered that her local cable company had replaced her faulty router three months prior – leaving her business data totally vulnerable."

■ *Don't leave Sharky totally vulnerable. Send me your true tale of IT life at sharky@computerworld.com. You'll get a stylish Shark shirt if I use it.*

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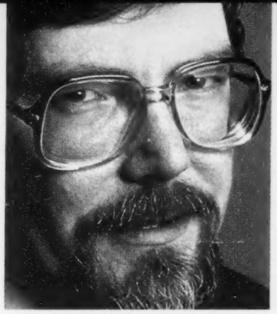
■ FRANKLY SPEAKING

Frank Hayes



Agile Reality

IF YOU READ Tom Hoffman's article "A Telco Giant Gets Agile" (page 30) about how BT is using agile programming for a major software project, you may have stumbled a bit when you got to the description of the "Manifesto for Agile Software Development." Chances are good that, after a quick read, your reaction was "That's all agile is?"

Or maybe your response was "What a load of hooey!"

Agile programmers value individuals and interactions over processes and tools? Working software over comprehensive documentation? Customer collaboration over contract negotiation? Responding to change over following a plan? That's all very warm and fuzzy, but kumbaya circles don't deliver real applications.

Hard-nosed pragmatism is what you need to produce real software — right?

Exactly. So let's get hard-nosed and pragmatic for a moment about software development.

What do we know from a half-century of software projects? Most of them fail. They run over budget, run late, run off the rails. They cost more, take longer and deliver less functionality than they should.

The bigger a software project is, the more likely it is to fail. And the bigger the project is, the more likely it is to have all the trappings of traditional software development: the extensive plans, complex negotiations, detailed documentation and painstakingly defined processes.

The hard-nosed, pragmatic conclusion?

Relying on plans doesn't work.

Relying on contract negotiations doesn't work.

Relying on comprehensive documentation doesn't work.

Most of all, relying on processes and tools doesn't work.

At worst, these things are merely bureaucratic crutches.

■ Kumbaya circles don't deliver real applications. Hard-nosed pragmatism is what you need to produce real software.

At best, they're still only the machinery of programming projects. You can't rely on them to deliver the goods.

From a hard-nosed, pragmatic perspective, machinery doesn't deliver software.

Programmers do.

And the software that they deliver to corporate users has to meet the needs of human employees, changing business requirements and shifting market conditions. Oh, and that software is useless until it's actually in the hands of the people who can do business with it.

So responding to change is at least as important as having and following a plan.

Getting in close with users is at least as important as negotiating what is to be delivered.

Delivering software that helps users do business is at least as important as writing the documents that describe it.

And the interactions of the human beings who will make and use the software are at least as important as the processes and tools they'll use to create and take advantage of it.

As much as that manifesto may sound like highfalutin hooey, this isn't warm and fuzzy kumbaya. It's coldly logical and utterly pragmatic.

It's also not enough.

Because just as machinery doesn't deliver software, values don't either. If you believe that's all agile programming is, you're still missing something truly important.

We need the machinery — some of it, anyway — to help us get the job done. We need the values to keep our priorities straight.

But most of all, we need the focused skills, intelligence and experience of both programmers and users. That's the heart — and the hard nose — of any successful software development approach, agile or not.

And that's no kumbaya. ■

Frank Hayes *is* Computerworld*'s senior news columnist. Contact him at frank_hayes@computerworld.com.*

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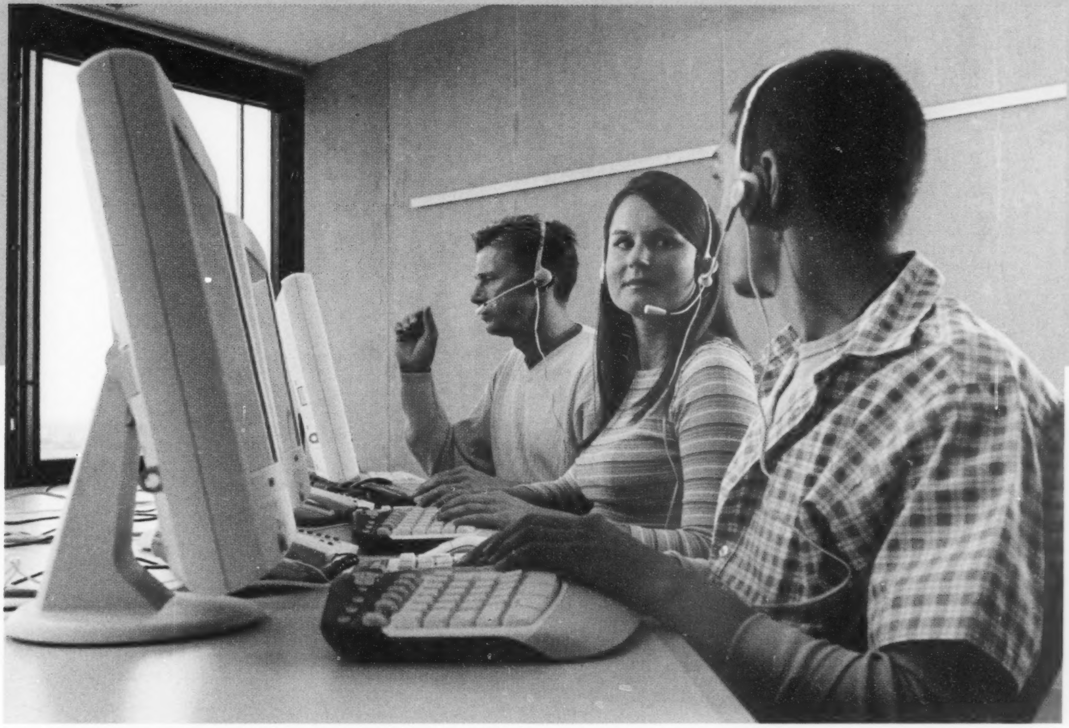

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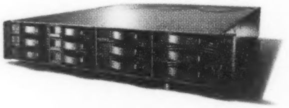

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